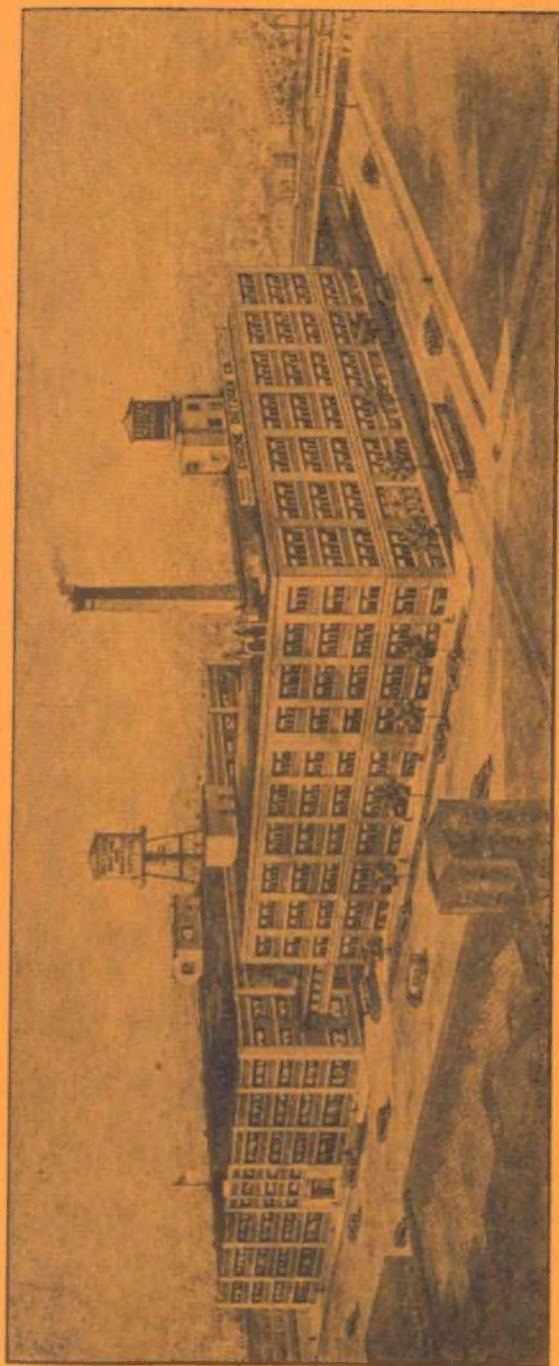


Catalog No. 38A

# DIETZGEN

**SPECIAL DISCOUNTS**  
ALLOWED  
EDUCATIONAL INSTITUTIONS  
Write For Quotations

ESSENTIAL  
DRAWING  
INSTRUMENTS  
and  
MATERIALS

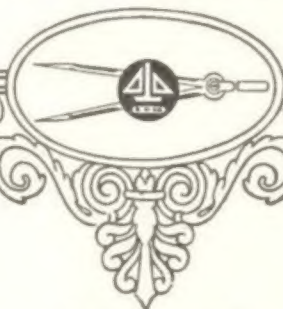


EUGENE DIETZGEN CO.  
Factory  
and  
General Office of Chicago Branch  
Chicago, Illinois



Catalog  
No. 38A  
**EUGENE  
DIETZGEN  
CO.**

ESSENTIAL  
DRAWING  
INSTRUMENTS  
and  
MATERIALS



BRANCHES

<b>CHICAGO</b> 2425 Sheffield Ave.	<b>NEW YORK</b> 218 E. 23rd St.	<b>SAN FRANCISCO</b> 523 Market St.
<b>NEW ORLEANS</b> 318 Camp St.	<b>PITTSBURGH</b> 805 Liberty Ave.	<b>PHILADELPHIA</b> 1627 Sansom St.
<b>WASHINGTON</b> 407 Tenth St., N. W.	<b>MILWAUKEE</b> 611 N. Broadway	<b>LOS ANGELES</b> 945 S. Broadway

FACTORY AT CHICAGO

Cable Address: Anabasis, New York

**T**HIS Catalog No. 38A contains a listing of the essential drawing instruments and materials in popular use.

The Drawing Instruments listed show only the larger and more complete sets of our various grades, arranged in a convenient manner for your easy selection of the grade best suited to your respective needs.

Further information regarding our line or literature on specific items will be supplied promptly upon request at our nearest branch.

Quality is a heritage at Dietzgen. Since our inception over a half century ago, we have adhered faithfully to the policy of the founders, "Enduring Worth at Reasonable Cost." This policy has earned a wealth of friends in every part of the world. It has made the name Dietzgen synonymous with quality and honest value everywhere.

Our prices are and will continue to be the lowest, consistent with the selected stock and the unsurpassed workmanship that enters into all of our products.

The strategic locations of Dietzgen branches also offer very definite advantages to the buyer. Your orders will be promptly filled from offices in Chicago, New York, San Francisco, New Orleans, Pittsburgh, Los Angeles, Philadelphia, Washington and Milwaukee—also from progressive dealers in all principal cities in the United States, Canada, Mexico, and elsewhere.

EUGENE DIETZGEN CO.





## Section 1

### DRAWING PAPERS

#### DRAWING PAPERS IN SHEETS



- No. 5.** Napoleon Cold Pressed Drawing Paper. Thick. A hard, smooth, pure white paper. High rag content and uniform surface, specially adapted for fine line drawings. Of great strength and durability. Perfect erasing qualities. Highest grade for school use. Sold in reams or quires.
- |                            |                            |                             |
|----------------------------|----------------------------|-----------------------------|
| 19 × 24 in., Ream, \$51.00 | 22 × 30 in., Ream, \$72.00 | 27 × 40 in., Ream, \$118.00 |
|----------------------------|----------------------------|-----------------------------|
- No. 6A.** Stratton Detail Drawing Paper. Medium thick. Buff color. Manila stock, slightly grained surface. An inexpensive paper. In reams and quires.
- |                          |                           |                             |
|--------------------------|---------------------------|-----------------------------|
| 9 × 12 in., Ream, \$1.80 | 12 × 18 in., Ream, \$3.60 | 22 × 30 in., Ream, \$ 13.50 |
| 11 × 15 " " 3.45         | 18 × 24 " " 7.20          | 24 × 36 " " 14.40           |
- No. 6B.** Stratton Detail Drawing Paper. Thick. Otherwise like 6A. In reams and quires.
- |                          |                           |                             |
|--------------------------|---------------------------|-----------------------------|
| 9 × 12 in., Ream, \$2.40 | 12 × 18 in., Ream, \$4.80 | 22 × 30 in., Ream, \$ 17.40 |
| 11 × 15 " " 4.35         | 18 × 24 " " 9.45          | 24 × 36 " " 18.90           |
- No. 8.** Rexton Drawing Paper. White. A strong, pure white paper with hard smooth surface. Excellent for fine line pen and pencil drawings. Very good erasing resistance. A reasonably priced paper especially suitable for school use. In quires or reams.
- |                            |                            |                             |
|----------------------------|----------------------------|-----------------------------|
| 11 × 15 in., Ream, \$ 7.50 | 17 × 22 in., Ream, \$16.00 | 22 × 30 in., Ream, \$ 30.00 |
| 15 × 22 " " 15.00          | 19 × 24 " " 20.00          | 27 × 40 " " 50.00           |
- No. 10.** Union Drawing Paper. White. Slightly grained surface. Excellent for school use. Sold in reams or quires.
- |                          |                            |                             |
|--------------------------|----------------------------|-----------------------------|
| 9 × 12 in., Ream, \$4.40 | 15 × 22 in., Ream, \$13.00 | 22 × 30 in., Ream, \$ 26.00 |
| 11 × 15 " " 6.50         | 18 × 24 " " 17.50          | 24 × 36 " " 35.00           |
| 12 × 18 " " 8.75         | 19 × 24 " " 18.35          | 27 × 40 " " 44.40           |
| 14 × 17 " " 7.80         |                            |                             |
- No. 10G.** Vernon Drawing Paper. Green. Medium thick. Slightly grained surface. A moderately priced paper, excellent for school use. Sold in reams or quires.
- |                          |                            |                             |
|--------------------------|----------------------------|-----------------------------|
| 9 × 12 in., Ream, \$4.20 | 15 × 22 in., Ream, \$12.50 | 22 × 30 in., Ream, \$ 25.00 |
| 11 × 15 " " 6.30         | 18 × 24 " " 16.75          | 24 × 36 " " 33.00           |
| 12 × 18 " " 8.40         | 19 × 24 " " 17.70          | 27 × 40 " " 41.00           |
- No. 10L.** Kempton Drawing Paper. White. Medium thick. Slightly grained surface. A dependable white paper offered at a low price. Suitable for school use. Sold in reams and quires.
- |                          |                            |                             |
|--------------------------|----------------------------|-----------------------------|
| 9 × 12 in., Ream, \$3.40 | 15 × 22 in., Ream, \$10.00 | 22 × 30 in., Ream, \$ 20.00 |
| 11 × 15 " " 5.00         | 18 × 24 " " 13.25          | 24 × 36 " " 26.50           |
| 12 × 18 " " 6.65         | 19 × 24 " " 14.00          | 27 × 40 " " 33.00           |
- No. 11.** Saxon Drawing Paper. Cream. Medium thick. A tough cream paper. Strong and durable and will withstand repeated erasing without smudging or tearing. Finely grained surface takes ink, pencil, and water color equally well.
- |                          |                            |                             |
|--------------------------|----------------------------|-----------------------------|
| 9 × 12 in., Ream, \$4.60 | 15 × 22 in., Ream, \$14.00 | 22 × 30 in., Ream, \$ 28.00 |
| 11 × 15 " " 7.00         | 18 × 24 " " 18.25          | 24 × 36 " " 36.50           |
| 12 × 18 " " 9.15         | 19 × 24 " " 19.25          | 27 × 40 " " 45.00           |
- No. 11A.** Burton Drawing Paper. Thick. Light cream color. High grade, slightly grained surface, strong, durable, and will stand erasing exceptionally well. Takes pencil, ink and water color. Sold in reams or quires.
- |                          |                            |                             |
|--------------------------|----------------------------|-----------------------------|
| 9 × 12 in., Ream, \$6.20 | 15 × 22 in., Ream, \$19.00 | 22 × 30 in., Ream, \$ 38.00 |
| 11 × 15 " " 9.50         | 18 × 24 " " 24.75          | 24 × 36 " " 49.50           |
| 12 × 18 " " 12.40        | 19 × 24 " " 26.00          | 27 × 40 " " 61.50           |
- No. 11L.** Rockton Drawing Paper. Medium thick. Light cream color with a slightly grained surface. Good erasing qualities. Moderately priced. Popular for High School drawing paper. Sold in reams or quires.
- |                          |                            |                             |
|--------------------------|----------------------------|-----------------------------|
| 9 × 12 in., Ream, \$3.40 | 15 × 22 in., Ream, \$10.00 | 22 × 30 in., Ream, \$ 20.00 |
| 11 × 15 " " 5.00         | 18 × 24 " " 13.25          | 24 × 36 " " 26.50           |
| 12 × 18 " " 6.65         | 19 × 24 " " 14.00          | 27 × 40 " " 33.00           |
- No. 11T.** Macon Drawing Paper. Medium thick. Light cream color with a finely grained surface. Good erasing qualities. Most popular for High School use. Sold in reams or quires.
- |                          |                            |                             |
|--------------------------|----------------------------|-----------------------------|
| 9 × 12 in., Ream, \$4.20 | 15 × 22 in., Ream, \$12.50 | 22 × 30 in., Ream, \$ 25.00 |
| 11 × 15 " " 6.30         | 18 × 24 " " 16.75          | 24 × 36 " " 33.00           |
| 12 × 18 " " 8.40         | 19 × 24 " " 17.70          | 27 × 40 " " 41.00           |



## EDCO ARTIST BOARDS

Each Sheet Embossed



Manufactured of high grade raw materials with a uniform tough surface free from blemishes, and of clear color. Usable on either side. In two surfaces.

### Medium Surface

A finely grained surface adaptable to all media. Excellent results may be secured with pen, pencil, water color, tempera and washes.

No. 16M-2. Edco Artist Board. White.	Two ply.	Sheet size 22 X 30 in.	100 sheets,	\$10.80
No. 16M-3. Edco " " " "	Three " " "	22 X 30 " "	100 " "	16.20
No. 16M-4. Edco " " " "	Four " " "	22 X 30 " "	100 " "	23.00

### Smooth Surface

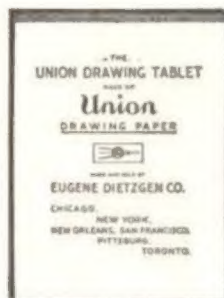
A highly finished surface providing an excellent medium for pen and ink work.

No. 16S-2. Edco Artist Board. White.	Two ply.	Sheet size 22 X 30 in.	100 sheets,	\$10.80
No. 16S-3. Edco " " " "	Three " " "	22 X 30 " "	100 " "	16.20
No. 16S-4. Edco " " " "	Four " " "	22 X 30 " "	100 " "	23.00

## CHARCOAL PAPERS

No. 19. Strathmore Charcoal Paper. White.				
Royal, 19 X 25 inches	.	.	.	Ream, \$20.00 Quire, \$1.00

## SCHOOL DRAWING TABLETS AND SKETCH BLOCKS



Most convenient for sketching and water color work, put up in handy tablets, size 9 X 12 inches, with heavy cardboard backing, bound on one side only.

No. 31. Union School Drawing Tablet. Made of No. 10 Union Drawing Paper, 9 X 12 inches, 16 sheets, heavy manila envelope with each tablet	Dozen, \$6.00	Each, \$0.60
---	---------------	--------------

No. 32. Toulon School Drawing Tablet. Made of No. 58 Toulon Drawing Paper, 9 X 12 inches, 16 sheets, heavy manila envelope with each tablet	Dozen, \$7.50	Each, \$0.75
---	---------------	--------------

No. 31

No. 33. Edco Sketch Block. Made of good quality special white drawing paper, 9 X 12 inches, 20 sheets, with cardboard backing, bound on one side only; convenient for sketching.	Dozen, \$2.75	Each, \$0.25
--	---------------	--------------

No. 33F. Kempton School Drawing Tablet. Made of No. 10L Kempton Drawing Paper, 9 X 12 inches, 24 sheets, with cardboard backing, bound at top. Excellent for all types of sketching and drawing	Dozen, \$3.30	Each, \$0.35
---	---------------	--------------

## ENVELOPES FOR DRAWING PAPERS

Made of extra heavy, red rope paper, opening on long side.

No. 40G. Envelopes for drawing paper, 12 X 16 in.	Per 100, \$ 8.00
No. 40K. " " " " 13 1/4 X 20 " "	" " 10.00





## DRAWING PAPERS IN ROLLS

**No. 52B.** Stratton Detail Drawing Paper. Buff. Thick. A buff detail drawing paper made of highest grade manila stock free of ground wood pulp. Especially made for drafting purposes. The high quality of material used gives excellent strength and folding properties. Has a fine grained surface, very good erasing resistance, and is suitable for ink and pencil drawings. Does not soil easily.



	Width, 36 in.	42 in.	48 in.	54 in.
Roll of 50 pounds—per pound, \$0.17				
" " 10 yards — " roll . . . . .	\$1.20	\$1.30	\$1.55	\$1.75
" " 50 " — " " . . . . .	4.20	4.95	5.80	6.60
" " 100 " — " " . . . . .	7.15	8.40	9.85	11.20

**No. 59W.** Macon Drawing Paper. Cream. Medium thick. Slightly grained surface. A cream paper with good erasing qualities. Of good strength with a slightly grained surface. Used extensively by schools, for though reasonably priced, it combines many qualities usually found only in better papers.

	Width, 30 in.	36 in.	42 in.
Roll of 40-50 pounds—per pound, \$0.27			
" " 10 yards — " roll . . . . .	\$0.95	\$1.10	\$1.30
" " 50 " — " " . . . . .	3.80	4.40	5.20

Also in sheets, see No. 11T.

## Section 2

## TRACING CLOTH

**No. 128.** Madison Tracing Cloth. Blue. A popular tracing cloth that has met with favor in many drafting rooms. Medium weight, yet exceptionally transparent. Durable, will withstand repeated erasures. Uniform finish takes ink readily. Reproduces clear contrastive prints. Excellent quality at low cost.

	Width, 30 in.	36 in.	42 in.
Roll of 24 yards . . . . .	\$17.50	\$19.25	\$23.75

Also obtainable in 4 yd. rolls 36" wide.

**No. 128S.** Madison Tracing Cloth. Blue. In cut sheets, wrapped one sheet on a tube.  
 15 × 20 in. 1 sheet on tube . . . . . Doz. Rolls, \$3.00      Carton 50 Rolls, \$12.50  
 18 × 24 " 1 " " " " . . . . . " " " 4.20      " 50 " 17.50

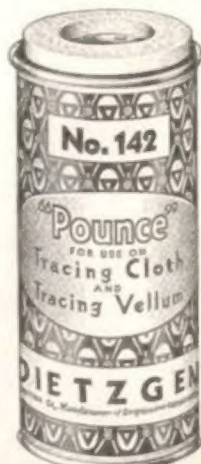
**No. 135.** Imperial Tracing Cloth. Blue. Imperial tracing cloth is a quality product of world renown, unsurpassed for its perfect merging of the factors vital to producing tracing cloth supremacy, viz; a heavy cloth superbly woven, clear transparency, excellent drawing surface, resistance to effects of age and use.

Width	24 in.	30 in.	36 in.	38 in.	42 in.	48 in.	54 in.
Roll of 24 Yds.	\$21.25	22.25	25.50	27.75	30.50	38.75	48.00
Per Yard	1.10	1.20	1.30	1.45	1.55	2.15	2.70

## TRACING CLOTH POWDERS

**No. 142.** Tracing Cloth Powder. For preparing tracing cloth so it will take ink readily. No cloth or tuft of cotton needed, as the powder is rubbed evenly over the surface with, and thoroughly removed by, the felt disc which is securely fastened to the top of the cover. In 3 oz. canister shakers.

Doz. . . . .	\$2.80
Each . . . . .	.25



No. 142



## Section 3

## TRACING PAPERS

All tracing papers are obtainable in 5 and 10 yard rolls. Minimum order sufficient to convert a complete standard roll into desired rolls. No minimum on Nos. 161 and 163 in 36-in. width.

No. 161. Winston Tracing Paper. Thin. White, fairly smooth surface. This is an exceptionally transparent paper, well adapted for architectural detailing and rough pencil sketching. Its low cost permits liberal use in preliminary work and for full size details. An unusual value in tracing paper.

	Width,	36 in.	42 in.	60 in.
Roll of 20 yards, . . . . .		\$1.15	\$1.40	\$1.90
" " 50 " . . . . .		2.30	2.75	3.75

No. 161M. Winston Tracing Paper. Medium, otherwise like No. 161.

	Width,	36 in.	42 in.
Roll of 20 yards, . . . . .		\$1.25	\$1.50
" " 50 " . . . . .		2.55	3.00

No. 163. Lupton Tracing Paper. Thin. White, smooth but unglazed surface. A natural white 100% rag stock, thin tracing paper, somewhat smooth but unglazed surface, giving it a good pencil surface. This paper has exceptional strength, good erasing qualities and excellent tracing and blue printing transparency. It is suitable for both pencil and ink, and is especially adapted to pencil drawings and sketches of permanent record. Rolls watermarked "Dietzgen Lupton".

	Width,	36 in.	42 in.
Roll of 20 yards, . . . . .		\$1.60	\$1.80
" " 50 " . . . . .		3.60	4.15

No. 167. Briston Bond Tracing Paper. Medium thin. A natural white, bond tracing paper. It has a moderately smooth, unglazed surface with just the right amount of tooth to take pencil well. Because it is made of 100% clean rag stock, it is exceptionally strong and clear. This paper has great tearing and folding strength, and will therefore, withstand any amount of rough handling. The erasing qualities are perfect. Briston Tracing Paper is ideally adapted for fine detail drawing of a permanent nature in pencil or ink, and is equally adapted for color. It has good transparency, and will give "contrasty" reproductions.

	Width,	30 in.	36 in.	42 in.
Roll of 20 yards, . . . . .		\$2.10	\$2.50	\$2.85
" " 50 " . . . . .		4.45	5.50	6.35

No. 173L. Milton Transparent Tracing Paper. Thin. A clear white, transparent tracing paper, with a grained or fine tooth surface. It contains a high percentage of clean white rags, which gives it excellent strength. The erasing qualities of this paper are exceptionally good, and it will take pencil, ink and color equally well. This paper has a high uniform transparency from which blue prints of great contrast can be produced. These features make Milton Tracing Paper ideal for detailing, drawing and sketching. It is, therefore, popular among architects and engineers.

	Width,	36 in.	42 in.
Roll of 20 yards, . . . . .		\$2.00	\$2.35
" " 50 " . . . . .		4.40	5.10

No. 176M. Dependon Tracing Paper. Medium thin. A white transparent tracing paper. This paper is like No. 176L but heavier, and will stand more handling than No. 176L and still maintain its transparency and reproduction qualities. Its heavier weight without loss of transparency, makes it an ideal moderately priced paper for detail drawing and sketching.

	Width,	30 in.	36 in.	42 in.
Roll of 20 yards, . . . . .		\$1.95	\$2.65	\$2.85
" " 50 " . . . . .		3.90	5.20	5.70

No. 183. Bolton Tracing Paper. Medium thin. Bluish tint. Unglazed surface. A strong tracing paper, bluish in tint, with unglazed surface. This paper has just the right amount of "tooth" to cause it to take pencil well, and is also adapted to ink or color work. It is very transparent and has perfect erasing qualities, permitting erasures without leaving a trace. It can be folded without leaving a crack that will appear in reproduction. This paper makes excellent reproductions from pencil and ink drawings. It is also most suitable for typewritten specifications, and data to be reproduced by the blue printing or other reproduction processes. Bolton Tracing Paper is one of our most popular tracing papers.

	Width	36 in.	42 in.	60 in.
Roll of 20 yards . . . . .		\$2.65	\$2.85	\$3.50

In sheets.				
8 1/2 x 11 inches, 500 sheets packed in carton . . . . .				\$ 4.40
8 1/2 x 13 " 500 " . . . . .				5.50
12 x 18 " 500 " . . . . .				12.45
18 x 24 " 250 " . . . . .				12.30
24 x 36 " 100 " rolled on pasteboard tube . . . . .				10.10

No. 185. Crafton Transparent Sketching Paper. Heavy. White. Fine tooth surface. A heavy, yet very transparent, white tracing paper with an excellent, fine tooth drawing surface. This paper is strong, and will not discolor with age. The erasing qualities are exceptionally good, as lines can be erased repeatedly without smudging or leaving "ghost" marks. Because of its high transparency, it makes perfect reproductions, and is well adapted for accurately tracing fine line drawings, blue prints, or old originals. Crafton Tracing Paper, not being treated with oil or other transparentizing substances, being highly transparent and having unusual erasing qualities, fills a need long felt in the drafting room. This paper is highly recommended for all types of ink or color work as well as pencil drawings.

	Width	36 in.	42 in.
Roll of 20 yards . . . . .		\$3.80	\$4.25
" " 50 " . . . . .		8.40	9.45







## Section 4

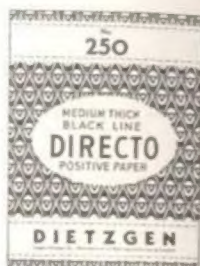
## REPRODUCTION PAPERS



215



229



250

BLUE PRINT PAPERS

210. **Excello Satin Blue Print Paper**, Thick, 50% rag content. Produced to meet a demand for a moderate priced dependable paper. Will stand up well under rough usage, having substantial folding endurance and tearing strength. Produces excellent blue prints of sharp contrast in line and background. Most popular for school use.

Roll of 50 yards.	Width,	24 in.	27 in.	30 in.	36 in.	42 in.	48 in.	54 in.
" " 25 "		\$3.05	\$3.15	\$3.30	\$3.90	\$4.50	\$5.75	\$6.60
" " 10 "		1.70	1.75	1.85	2.15	2.50	3.20	3.65
		1.00	1.05	1.10	1.30	1.50	1.95	2.20

215. Union Satin Blue Print Paper, Thick, 100% selected rag stock. Finest printing and keeping qualities. Ideal for school use.

	Width,	24 in.	30 in.	36 in.	42 in.	54 in.
Roll of 50 yards, . . . . .		\$4.55	\$5.25	\$6.25	\$7.25	\$9.25
"    25   "    "    "    "    "		2.50	2.90	3.45	4.00	5.10
"    10   "    "    "    "    "		1.50	1.75	2.10	2.40	3.10

When ordering always specify Printing Speeds in accordance with the following:

A	SPEED	—	about	4	minutes	exposure	in	bright	sunlight.
C	"	"	"	1	"	"	"	"	"
H	"	"	"	30	to	40	seconds	exposure	in
M	"	"	"	20	"	30	"	"	"
S	"	"	"	10	"	20	"	"	"

## VANDYKE SOLAR PAPERS

227. Vandyke Solar Paper. Medium Thick. For Positive Prints—brown lines on white background

	Width,	30 in.	36 in.	42 in.	54 in.
Roll of 50 yards, . . . . .		\$ 9.90	\$11.50	\$13.30	\$21.15
" " 10 " . . . . .		3.30	3.85	4.45	7.05

229. Vandyke Solar Paper. Thin. For Negative Prints—white line on dark brown background. Excellent for large or quantity mailing.

	Width,	30 in.	36 in.	42 in.	54 in.
Roll of 50 yards, . . . . .		\$ 9.00	\$10.60	\$12.35	\$18.70
" " 10 . . . . .		3.00	3.55	4.12	6.25

Also obtainable in cut sheets of any size.

We have extensive sensitizing departments at our various branches assuring delivery at all times of freshly prepared Reproduction Papers in any part of the country.

## DIRECTO PAPER

Produces Positive (black lines on white background) Prints from original tracings without the use of a negative.

DIRECTO Print Paper produces a print having jet black lines on white background direct from the original tracing without the use of an intermediate negative. The prints are simply produced by exposing in the regular manner the same as blue print paper, but instead of washing in water and potash they can either be developed by a swab of cotton moistened with the developing solution or by means of a developing machine. This moist developing on only one side of the print makes it possible to use these prints immediately, for there is no long period of drying necessary, this form of obtaining prints from tracings is ideal for use where adequate washing and drying facilities are not available.

Directo paper can be obtained in rolls or in cut sheets, cut as ordered.

250. Directo Positive Print Paper, Thick.

	Width,	30 in.	36 in.	42 in.	54 in.
Roll of 50 yards, . . . . .		\$5.40	\$6.40	\$7.40	\$10.80
" " 10 " . . . . .		1.80	2.15	2.45	3.60

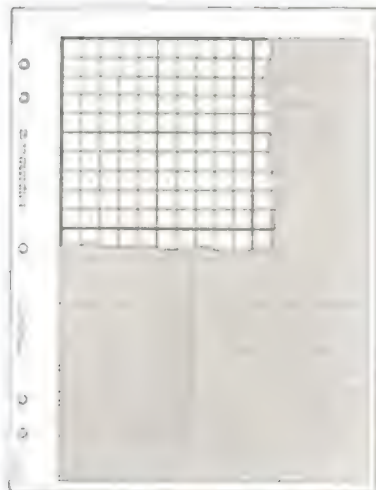
Also obtainable in cut sheets of any size.



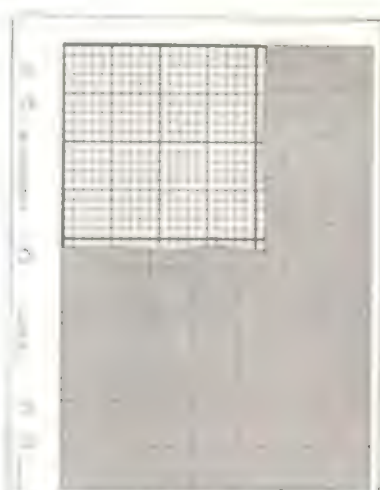


## Section 5 CROSS SECTION PAPERS GRAPH SHEETS

Printed in Olive Green



No. 340-10



No. 340-20

Letter head size,  $8\frac{1}{2} \times 11$  in.

Dietzgen Graph Sheets are finished, accurate papers for statisticians, technical schools, laboratories, etc. Printed from accurate engravings in a beautiful olive green which can be photographed or photo-printed. The paper used is a high grade, medium thick, bond tracing paper of suitable strength and sufficient transparency to permit the making of blue prints and other reproductions.

No. 340-8.	Engraving 7 × 10 in., 8 × 8 to the inch. Inch line accented.	1000 sheets, \$13.00	100 sheets, \$1.50	10 sheets, \$0.25
No. 340-10.	Engraving 7 × 10 in., 10 × 10 to the inch. 5th and inch lines progressively accented.	1000 sheets, \$13.00	100 sheets, \$1.50	10 sheets, \$0.25
No. 340-20.	Engraving 7 × 10 in., 20 × 20 to the inch. 5th, 10th, and inch line progressively accented.	1000 sheets, \$13.00	100 sheets, \$1.50	10 sheets, \$0.25
No. 340-M.	Engraving 18 × 25 in. Half inch, inch, and 5th inch lines progressively accented.	1000 sheets, \$13.00	100 sheets, \$1.50	10 sheets, \$0.25
No. 340-I.	Engraving 7 × 10 in., for Isometric perspectives and orthographic projections.	1000 sheets, \$13.00	100 sheets, \$1.50	10 sheets, \$0.25
No. 340-L110.	Engraving 7 × 10 in., Semi logarithmic. One 10 in. cycle by 10 divisions to inch. 5th lines accented.	1000 sheets, \$13.00	100 sheets, \$1.50	10 sheets, \$0.25
No. 340-L310.	Engraving 7 × 10 in., Semi logarithmic. Three 10 in. cycles by 10 divisions to inch. 5th lines accented.	1000 sheets, \$13.00	100 sheets, \$1.50	10 sheets, \$0.25

No. 340-P. Engraving  $7\frac{1}{2} \times 10$  in., Polar co-ordinate. Concentric circles 1:10 in. apart; divided to degrees and numbered every 10 degrees in both directions.

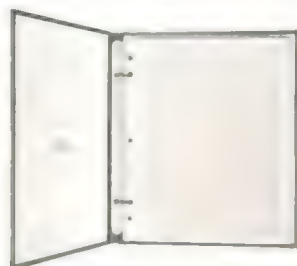
1000 sheets, \$13.00 100 sheets, \$1.50 10 sheets, \$0.25

### BINDERS

No. 341.

Binder for loose leaf sheets,  $8\frac{1}{2} \times 11$  in., substantially made of stiff binder board, covered with durable black cloth; two  $\frac{1}{4}$ -in. snap-rings.

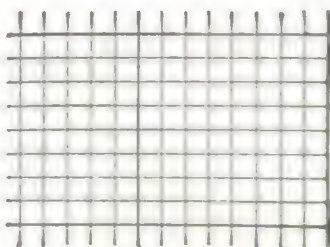
Each, \$0.80



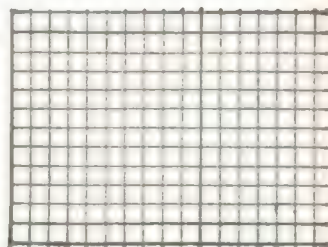
No. 341



## CROSS SECTION PAPERS



2128



No 368 10

## PLATE PRINTED SHEETS

- |             |  |               |               |                  |
|-------------|--|---------------|---------------|------------------|
| No. 368-5.  | Plate Printed Cross Section Paper in blue, on light weight ledger paper,<br>5 X 5 to 1 inch, inch line heavy Sheet size 17 X 22 inches.    | Ream, \$18.00 | Quire, \$1.00 | 10 Shts., \$0.50 |
| No. 368-8.  | Plate Printed Cross Section Paper in blue, on light weight ledger paper,<br>8 X 8 to 1 inch, inch line heavy. Sheet size 17 X 22 inches.   | Ream, \$18.00 | Quire, \$1.00 | 10 Shts., \$0.50 |
| No. 368-10. | Plate Printed Cross Section Paper in blue, on light weight ledger paper,<br>10 X 10 to 1 inch, inch line heavy. Sheet size 17 X 22 inches. | Ream, \$18.00 | Quire, \$1.00 | 10 Shts., \$0.50 |

## QUADRILLE RULED SHEETS

- |           |  |              |
|-----------|--|--------------|
| No. 370.  | <b>Ruled Cross Section Paper.</b> Quadrille ruled in blue on one side only, on bond paper, 10 X 10 to the inch with heavy inch lines. The ruling runs out to the edge of the sheet. A low priced cross section paper. Sheet size 8½ X 11 in. Package of 500 sheets | Pkg., \$2.00 |
| No. 370B. | <b>Ruled Cross Section Paper.</b> Quadrille ruled in blue on one side only, on bond paper, 10 x 10 to the inch with heavy inch lines. Sheet size 17 X 22 in. Package of 500 sheets   | Pkg., \$8.00 |
|           | 100  | 2.00         |
| No. 372.  | Like 370 but ruled 8 X 8 to the inch, sheet size 8½ X 11 in. Package of 500 sheets   | Pkg., \$2.00 |
| No. 372B. | Like 370B but ruled 8 X 8 to the inch, sheet size 17 X 22 in. Package of 500 sheets  | Pkg., \$8.00 |
|           | 100  | 2.00         |

## SKETCHING PAD OF TRACING PAPER

**Sketching Pad.** Provides a convenient medium for quick and accurate sketching in designing, drafting, engineering and architectural work. Consists of 30 sheets of good quality uncoated tracing paper and one sheet of Bristol Board imprinted with divisions 8 X 8 to the inch on one side and 10 X 10 to the inch on the other, which when placed under the top sheet of tracing paper furnishes a guide line for sketching.

These pads may enable one to attain facility in free-hand drawing and lettering. Sketches can be reproduced by blueprinting and all other reproduction processes, thus converting them into permanent records.

No. 374. Sketching Pad . . . . .	Each, \$0.60
----------------------------------	--------------

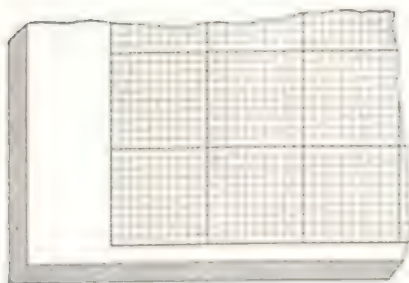


No. 374

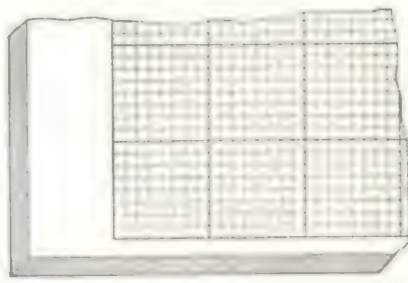




## CROSS SECTION PADS



No. 375



No. 376

### PLATE PRINTED

No. 375.	Cross Section Pads on Ledger paper, plate printed insuring accuracy of divisions and uniformity of color, printed in blue 10 × 10 to the inch with heavy inch lines. Most suitable for technical sketching. Reasonable in cost. Sheet size, 8½ × 11 in. 50 sheets to a pad.		
	Package of 12 pads, . . . . .	\$5.40	Pad, . . . . . \$0.45
No. 376.	Like No. 375 but divisions 8 × 8 to the inch.		
	Package of 12 pads, . . . . .	\$5.40	Pad, . . . . . \$0.45
No. 378.	Cross Section Pad, Quadrille ruled in blue, on writing paper the full area of the sheet on both sides, 5 × 5 to the inch. All lines uniform ruling. Sheet size 8½ × 11 in. Pad of 50 sheets, . . . . .		\$0.25

### LITHOGRAPHED

No. 375½.	Cross Section Pad, lithographed in blue, 10 × 10 to the inch. 25 Sheets of good quality ledger paper. 12 pads in folding carton. Pad, . . . . .	\$0.25
No. 376½.	Similar to 375½ but 8 × 8 to the inch. Pad, . . . . .	0.25
No. 377½.	Similar to 375½ but 4 × 4 to the inch. Pad, . . . . .	0.25

## "PRETTY NEAT" DRAWING BOARD



No. 379B

The "Pretty Neat" Drawing Board is a light weight, compact, extremely sturdy drawing board, simple to operate and complete in every detail, requiring no thumb tacks or "T" Square. It is accurately, sturdily and handsomely built of strong material for every day hard usage. The speed of the user may be extremely fast as he is not slowed down by "T" Squares or any cumbersome or bulky machinery. The end of the triangle guide strips which form the border of the board and the spring paper clamps, are so formed that they elevate the corners of the triangle above the adjacent side, giving absolute freedom of movement of the triangle beyond the limits of the drawing board. Made of hard composition board. Extremely precise, accurate drawings can be made, when accurate triangles are used. An 8 in., 45° triangle is suggested for use with these boards.

No. 379B.	"Pretty Neat" Drawing Board, 8½ × 11 in. . . . .	Each, \$1.50
No. 379C.	" " " " 8½ × 13 " . . . . .	1.75
No. 379D.	" " " " 9 × 12 " . . . . .	1.75
No. 379F.	" " " " 10 × 15 " . . . . .	2.25
No. 379K.	" " " " 12 × 18 " . . . . .	3.50

(For triangles for use with the "Pretty Neat" Drawing Boards, see catalog Nos. 1932B, 2017.)



## Section 6

### DRAWING INSTRUMENTS RULING PENS



(Illustrations approximately  $\frac{1}{2}$  size)

610.	Gem Union Master Ruling Pen.	5 in.	High speed steel.	Club handle.	Each, \$3.00
611.	" " " " " "	5 $\frac{1}{2}$	" " " " " "	" " " "	" 3.25
646.	Champion Ruling Pen	5 in.	Club handle		Each, \$2.00
647.	" " " " " "	5 $\frac{1}{2}$	" " " " " "	" " " "	" 2.25
648.	Federal Ruling Pen	5 in.	Spring blade, black handle		Each, \$1.30
649.	" " " " " "	5 $\frac{1}{2}$	" " " " " "	" " " "	" 1.40
656A.	Reliance Ruling Pen	5 in.	Plain spring blade	Aluminum handle	Each, \$0.70
656C.	" " " " " "	5	Slide catch cleaning device.	Black handle	" .30
656.	" " " " " "	5	Spring blade, black handle	" " " "	" .60
657A.	Reliance Ruling Pen	5 in.	Plain spring blade	Aluminum handle	Each, \$0.70
657C.	" " " " " "	5 $\frac{1}{2}$	Slide catch cleaning device.	Black handle	" .80
657.	" " " " " "	5 $\frac{1}{2}$	Spring blade, black handle	" " " "	" .60
658C.	Prep Ruling Pen	5 in.	Spring blade cleaning device.	Black handle	Doz., \$5.40
659C.	" " " " " "	5 $\frac{1}{2}$	" " " " " "	" " " "	" 5.40
662AC.	Designo and Constructo Ruling Pen.	5 in.	Spring blade with cleaning device.	Fluted aluminum handle	Doz., \$5.40
663AC.	Designo and Constructo Ruling Pen.	5 in.	Spring blade with cleaning device.	Fluted aluminum handle	Doz., 5.40
681K.	Reliance Detail Ruling Pen	6 in.	Spring blade, black handle		Each, \$1.75
691.	Champion Contour or Curve Pen	4 $\frac{1}{2}$ in.	Metal tubular pointed handle.		Each, 2.00





## BOW INSTRUMENTS Fork Spring Type



736A



736B



736C

Federal Bows are made of Spring-steel with "Ezy-Set" needle points

722A.	Federal Bow	Divider, 3 1/4 in., side screw adjustment,	Each	\$1.80
722B.	" "	Pencil, 3 1/4 " " " " " " " "	"	2.30
722C.	" "	Pen, 3 1/4 " " " " " " " "	"	2.70
736A.	Federal Bow	Divider, 3 1/4 in., center screw adjustment,	Each	2.50
736B.	" "	Pencil, 3 1/4 " " " " " " " "	"	3.10
736C.	" "	Pen, 3 1/4 " " " " " " " "	"	3.50



723A



723B



723C

Reliance Bows are made of Spring-steel

723A.	Reliance Bow	Divider, 3 1/4 in., side screw adjustment,	Each,	\$1.10
723B.	" "	Pencil, 3 1/4 " " " " " " " "	"	1.40
723C.	" "	Pen, 3 1/4 " " " " " " " "	"	1.65
737A.	Reliance Bow	Divider, 3 1/4 in., center screw adjustment,	Each,	1.65
737B.	" "	Pencil, 3 1/4 " " " " " " " "	"	1.90
737C.	" "	Pen, 3 1/4 " " " " " " " "	"	2.25



## BOW INSTRUMENTS Hoop Spring Type



748A



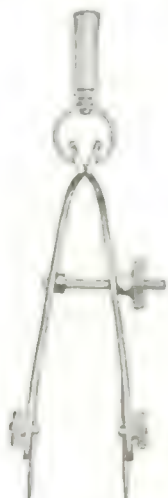
748B



748C

*Prep Bows are made of nickel silver and steel*

748A.	Prep Bow Dividers,	1 1/2 in.,	side screw adjustment,	Each, \$0.70
748B.	" " Pencil,	3 3/4	" " " " " "	.90
748C.	" " Pen,	3 3/4	" " " " " "	1.00
756A.	Prep Bow Dividers,	1 1/2 in.,	center screw adjustment,	Each, 1.10
756B.	" " Pencil,	3 3/4	" " " " " "	1.20
756C.	" " Pen,	3 3/4	" " " " " "	1.30



748 1/2 A



748 1/2 B



748 1/2 C

748 1/2 A.	Design Bow Dividers,	1 1/2 in.,	side screw adjustment,	Each, \$0.70
748 1/2 B.	" " Pencil,	3 3/4	" " " " " "	.90
748 1/2 C.	" " Pen,	3 3/4	" " " " " "	1.00
756 1/2 A.	Design Bow Dividers,	3 3/4 in.,	center screw adjustment,	Each, 1.10
756 1/2 B.	" " Pencil,	3 3/4	" " " " " "	1.20
756 1/2 C.	" " Pen,	3 3/4	" " " " " "	1.30





## GEM UNION MASTER BOW INSTRUMENTS



750B  
( $\frac{1}{2}$  size)



750C  
( $\frac{1}{2}$  size)



750K  
( $\frac{1}{2}$  size)



Master Bow instruments that every draftsman and designer will want. Sturdy in construction, yet so delicately balanced that they feel and handle like the regular size, small standard instruments. Their operation is fast and smooth, and they will hold their adjustment throughout their entire wide range.

Experience has shown that 80% of all circles drawn in everyday commercial drafting practice are less than 8 in. in diameter—which is the range of these Master Bow instruments.

- |       |   |              |
|-------|---|--------------|
| 750B. | Gem Union Master Bow Pencil, 5 $\frac{1}{2}$ -inch, nickel silver, center wheel adjustment, circular head. Capable of drawing circles of any size up to 8 inch diameter. . . . .                              | Each, \$5.50 |
| 750C. | Gem Union Master Bow Pen, 5 $\frac{1}{2}$ -inch, similar to 750B. . . . .   | Each, \$6.00 |
| 750K. | Gem Union Master Combination Bow Divider, Pencil and Pen, 5 $\frac{1}{2}$ -inch, similar to 750B. Has one fixed needle point leg, the other leg has an interchangeable divider, pencil, and pen part. . . . . | Each, \$7.25 |



768C  
 $\frac{1}{2}$  Size



768K  
 $\frac{1}{2}$  Size

## FEDERAL DROP SPRING BOW INSTRUMENTS

These Drop Spring Bow Instruments are unsurpassed for drawing small circles. Even circles of extremely small diameter can be drawn easily and quickly.

- |       |  |              |
|-------|--|--------------|
| 768C. | Federal Self-Adjusting, Drop Spring Bow Pen, 4-in. . . . .                   | Each, \$4.00 |
| 768K. | Federal Self-Adjusting, Drop Spring Bow Pen, with Pencil Part, 4-in. . . . . | Each, \$4.75 |



## DIVIDERS



792



798



800R



809



811

792 Federal Hairspring Dividers, 6 in. new concealed type straightening device made of rolled nickel silver; with fine steel points. . . Each, \$3.80

801R. Reliance Plain . . . 6 . . . plain type straightening device made of rolled nickel silver; reversible and replaceable steel points. Each, \$1.85

801R. Reliance Hairspring . . . 6 . . . same as 801R but with new spring needle type hair spring device. . . . . Each, \$2.65

809. Prep Plain . . . 6 . . . with new concealed type straightening device; made of nickel silver; with reversible and replaceable steel needle points. . . . . Each, \$1.10

811 Designo Plain . . . 6 . . . plain type straightening device made of hard processed metal, heavily nickel-plated; with steel points. . . . . Each, \$0.90



## COMPASSES



835



844R



854

- 835. Federal Compasses**, 6 in., (square type) made of rolled nickel silver and steel, with new concealed type straightening device; fixed needle point leg with screw thread needle point; interchangeable pencil part, and spring blade pen part; 4 in. lengthening bar, combination screwdriver and lead box with extra leads; key; metal needle box with extra needles, complete. All knee insert plates and screws in the joints are made of stainless steel, assuring continual perfect operation. . . . . **Each, \$6.50**
- 844R. Reliance Compasses**, 6 in., (square type) made of rolled nickel silver and steel, with plate type straightening device; fixed needle point leg, screw thread needle point; interchangeable pencil part, and spring blade pen part; 3 in. lengthening bar, combination screwdriver and lead box with extra leads; complete. . . . . **Each, \$4.30**
- 854. Prep Compasses**, 6 in., (flat type) made of nickel silver and steel, with new concealed type straightening device; both legs with opposite knee joints; interchangeable divider, pencil, and spring blade pen parts; the latter with cleaning device; adjustable, reversible and replaceable needle points; 4 in. lengthening bar, knurled metal handle for use with divider, pencil or pen parts as separate instruments, screwdriver, lead box with extra leads; complete. . . . . **Each, \$2.75**
- 856. Designo Compasses**, 6 in., (flat type) made of hard processed metal, heavily nickel plated and steel, with plate type straightening device; with one straight solid needle point leg with pivotal needle point holder; the other leg having a knee joint with interchangeable divider, pencil and spring blade pen part, the latter with cleaning device; 4 in. lengthening bar, metal handle for use with divider, pencil or pen part as separate instruments, screwdriver, lead box with extra leads; complete. . . . . **Each, \$2.40**





## CHAMPION BEAM COMPASSES

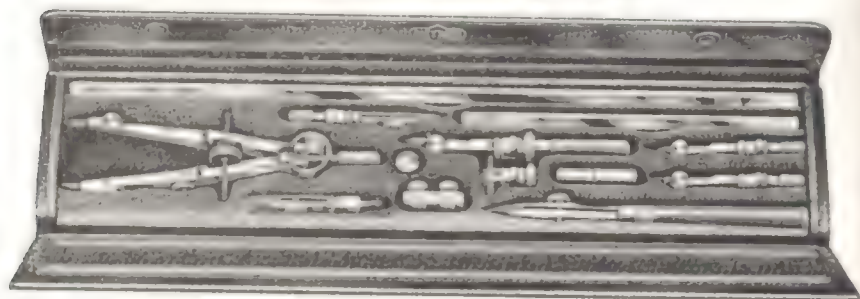


No. 967A

Constructed of heavy chromium finish brass and steel, these instruments are durable and strong with a non-rust finish, finish which is greatly resistant to scratches and dirt as well as a thorough protection against corrosion. Micrometer adjustment permits very fine setting. The set is simple in operation and design, for drawing any size circle up to 38 inches in diameter. The center part, pencil pen part and coupling are constructed to assure perfect rigidity at all times.

- No. 967A. Champion Beam Compasses, with two semi-cylindrical beams  $\frac{3}{16}$  inch diameter, one 13-inch beam and one 6-inch beam, thus making the instrument 19 inches overall. Micrometer adjustable center part, one pen, one coupling (with center stop) and one needle point with shoulder, lead box, complete in blue velvet-lined case. Each, \$8.50
- No. 967B. Champion Beam Compasses, with one 6-inch beam, one micrometer adjustable center part, one pencil part, complete without case. Each, \$4.00

## PROFESSIONAL DRAWING SETS



No. 968AK

A useful set of instruments in a beautiful compact case. Regardless of your present instruments these sets have an immediate appeal. Consist of the following instruments: large bow instrument with approximately an 8-inch range, a micrometer adjustable beam compass which draws circles over 3 ft. in diameter, and a new style ruling pen with Club Handle.

- No. 968AB. Professional Drawing Set, containing, in blue velvet lined case, the following:  
 1 only No. 967A Champion Beam Compass  
 1 " No. 647 Champion Ruling Pen— $5\frac{1}{4}$ -inch.  
 1 " No. 750B Gem Union Master Bow Pencil.  
 1 " No. 2467 Center tack,  $\frac{1}{2}$ -inch nickel silver. . . . . Set, \$16.50
- No. 968AC. Professional Drawing Set, like No. 968AB, except containing:  
 1 only No. 750C Gem Union Master Bow Pen in place of the 750B Bow Pencil. . . . . Set, \$17.00
- No. 968AK. Professional Drawing Set, like No. 968AB, except containing:  
 1 only No. 750K Gem Union Master Combination Bow Instrument with one fixed needle point leg and one interchangeable divider, pencil and pen part, in place of the 750B Bow Pencil. . . . . Set, \$18.50

Full description of instruments comprising above sets can be found under their respective numbers.



## Section 7

### DRAWING INSTRUMENT SETS GEM UNION DRAWING INSTRUMENTS



Professional Engineers, Draftsmen, Designers, Architects, wrote the specifications for Dietzgen Gem Union Drawing Instruments. Not just another grade of drawing instruments, but the highest quality instruments for professional work to its extremely accurate, precise work. These Trigonal (American) type instruments are very graceful in form and of the correct weight and balance.

Gem Union instruments are made of cold rolled nickel silver and the highest grade tool steel, the instruments are cut, not cast or rolled in, and are fitted and finished by hand. Thus, strength, rigidity, lightness and balance are assured, affording the greatest efficiency. Finish is remarkably fine and their perfection in every minute detail of construction, form, proportion and material is immediately evident. Each Gem Union instrument is guaranteed to be absolutely perfect in every respect.

Pocket-book button case lined with green velvet.

#### 7 Instrument Sets

1007C. Gem Union Drawing Instruments in pocket book leather case, containing:

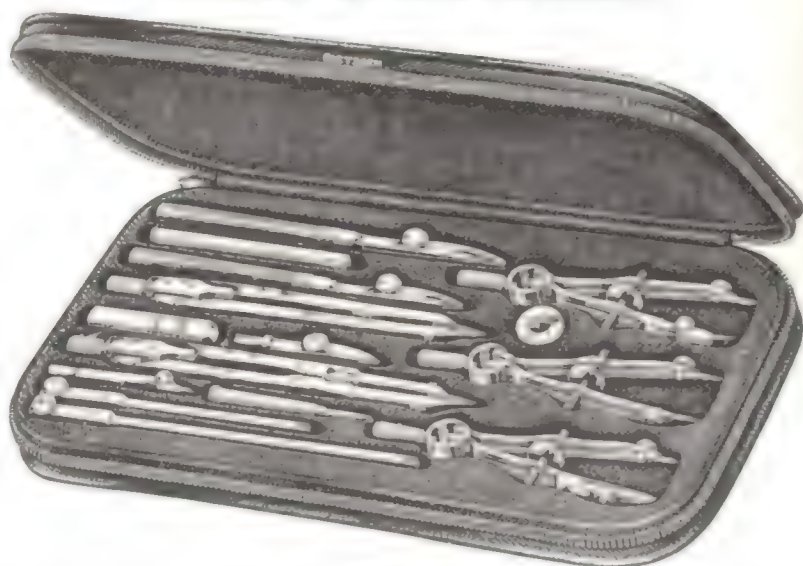
- 610 High-speed Steel Ruling Pen, 5 in., "Iso-Balance" Palisander handle, graduated thumb screw.
- 611 High-speed Steel Ruling Pen, 5½ in., "Iso-Balance" Palisander handle, graduated thumb screw.
- 730A Stainless Steel Bow Dividers, 3¾ in., center screw adjustment.
- 730B " " " Pencil, 3¾ " " " " "Ezy-Set"—needle point.
- 730C " " " Pen, 3¾ in., center screw adjustment, "Ezy-Set"—needle point with spring blade pen part of High-speed steel.
- 774 Hairspring Dividers, 6 in., Union Pivot joint with differential straightening device made of cold rolled nickel silver with stainless steel points.
- 819 Plain Compasses, 6 in., Union Pivot joint with differential straightening device; fixed needle point leg with screw thread needle point, interchangeable pencil part, pen part; two lengthening bars, one 4-in. and one 6-in. Made of cold rolled nickel silver with steel parts made of stainless steel.
- 2466 Center Tack.  
Combination Screwdriver and lead box.  
Combination key and needle box, with extra needle points.  
Metal box with spare parts.  
Cleaning and polishing cloth, . . . . . Set, \$41.50

- 1007. Gem Union Drawing Instruments, same as 1007C except with 710A-B-C Side Screw Adjustment Bows in place of 730A-B-C. . . . . Set, 39.50
- 1007Z. Gem Union Drawing Instruments, same as 1007 except in zipper case. . . . . Set, 41.50
- 1007CZ. Gem Union Drawing Instruments, same as 1007Z except in zipper case. . . . . Set, 43.50

NOTE: In stating the number of instruments in a set, accessories and parts are not counted.



## CHAMPION DRAWING INSTRUMENTS



1037CZ

Designed for those who prefer a flat, round type instrument to that of the trigonal type and whose work requires the highest grade equipment. Champion instruments are built under the most rigid standards of workmanship and accuracy and are regarded by professional and non-professional users who prefer this type of instrument as being the finest flat round type instrument made. They are highly regarded for accuracy, precision of manufacture, balance, finish and excellence of structural detail.

Champion instruments are made of selected quality rolled nickel silver and the highest grade tool steel. Many points of advanced design and special features of great practical value to draftsmen are embodied in Champion instruments. They stand superior to all other flat, round instruments in quality, workmanship and mechanical excellence, and can be relied upon to give a lifetime of service and satisfaction.

Zipper style fastener case, lined with blue velvet

## 7 Instruments

- 1037CZ. Champion Drawing Instruments in zipper style fastener case containing:
- |  |       |                          |
|--|-------|--------------------------|
| 646 "Iso-Balance" Palisander Handle Ruling Pen, 5 in., with spring blade   | 5 1/2 |                          |
| 647  | 4 1/4 | "Easy-Set" needle points |
| 754A Center Screw Adjustment Bow Dividers,   | 4 1/4 |                          |
| 754B " " " " Pencil,   | 4 1/4 |                          |
| 754C " " " " Pen,  | 4 1/4 |                          |
| 786 Hairspring Dividers, 6 in., fork slide type straightening device, adjustable, reversible, and replaceable needle points.   |       |                          |
| 832 Compasses, 6 in., fork slide type straightening device, fixed needle point leg, interchangeable divider, pen and pencil parts; adjustable, reversible, and replaceable needle points; two lengthening bars, one 4-in. and one 6-in.; clamp type pencil part. |       |                          |
| 2466 Center Tack.  |       |                          |
| Combination Screwdriver and Lead Box.  |       |                          |
| Combination Handle and Needle Box, with extra needle points.   |       |                          |
| Metal box with spare parts.  |       |                          |
| Cleaning and Polishing Cloth,  |       | Set, \$25.50             |
- 1037C. Champion Drawing Instruments, same as 1037CZ but in Pocketbook leather case. Set, 24.00
- 1037CD. Champion Drawing Instruments, similar to 1037C, except with 672 Detail Pen, 6 in., replacing 647 Ruling Pen. . . . . Set, 23.50
- 1037CDZ. Champion Drawing Instruments, same as 1037CD except in zipper case. . . . . Set, 25.00

## 9 Instrument Sets

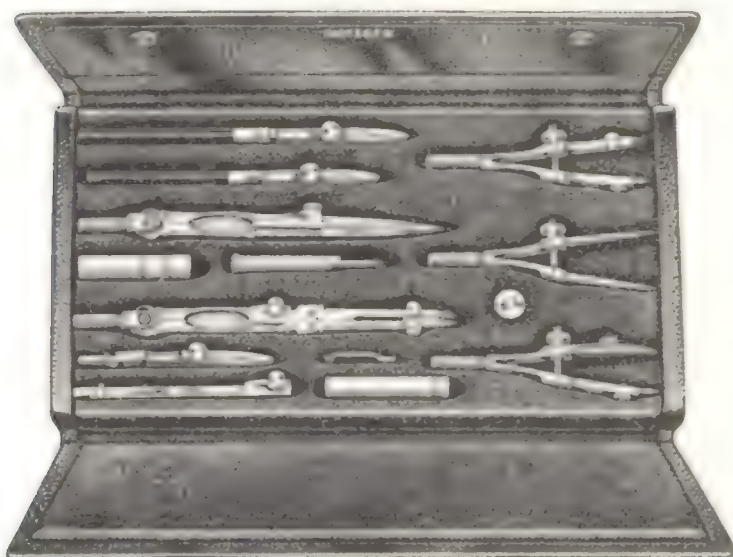
- 1039C. Champion Drawing Instruments, in pocketbook leather case. Similar to 1037C with the addition of the following instruments:
- |   |            |
|---|------------|
| 672 Ebony Handle Detail Pen, 6 in., spring blade              |            |
| 764K Drop Spring Bow Pen and Pencil, 4 1/2 in., spring blade, | Set, 31.75 |
- 1039CZ. Champion Drawing Instruments, same as 1039C except in zipper case. . . . . Set, 33.75

NOTE: In stating the number of instruments in a set, accessories and parts are not counted.





## FEDERAL DRAWING INSTRUMENTS



1047

These high quality (square type) instruments meet the specifications of those in the professional and non-professional field who require a high grade instrument at moderate cost. They have earned an enviable reputation among a wide class of users, which reputation is rooted in the reality of performance.

Federal Instruments are made of rolled nickel silver and high grade steel. Their purity of balance, excellent workmanship and finished appearance fully satisfy the requirements of the professional draftsman and discriminating student. Such structural details as precision cut screw threads, smooth working joints and well fitting parts are some of the features commented upon by their many users.

Pocket book button case, lined with green velvet.

### 7 Instrument Sets

1047. Federal Drawing Instruments, in pocket book case, containing

648	Ruling Pen, 5 in., spring blade, unbreakable black handle.	
649	5 1/2 in.	
722A	Bow Dividers, 3 1/4 in., side screw adjustment.	
722B	Pencil, 3 3/4 in.	"Ezy-Set" needle point.
722C	Pen, 3 3/4 in.	
792	Handspring Dividers, 6 in., with new concealed type straightening device, reversible and replaceable steel needle points.	
835	Compasses, 6 in., with new concealed type straightening device, fixed needle point leg with screw thread needle points, interchangeable pencil part, and spring blade pen part; 4 in., lengthening bar	
2467	Center tack.	
	Key.	
	Combination Screwdriver and Lead Box.	
	Metal Box with extra needle points.	
	Metal Box with spare parts.	
	Cleaning and Polishing Cloth, . . . . .	Set, \$21.50

1047Z. Federal Drawing Instruments, same as No. 1047 except with zipper case. . . . . Set, 23.50

1047C. Federal Drawing Instruments, similar to No. 1047, but with Nos. 721A-B-C center screw adjustment bows—replacing No. 720A-B-C, . . . . . Set, 23.80

1047CZ. Federal Drawing Instruments, same as No. 1047C, except in zipper case. . . . . Set, 25.80

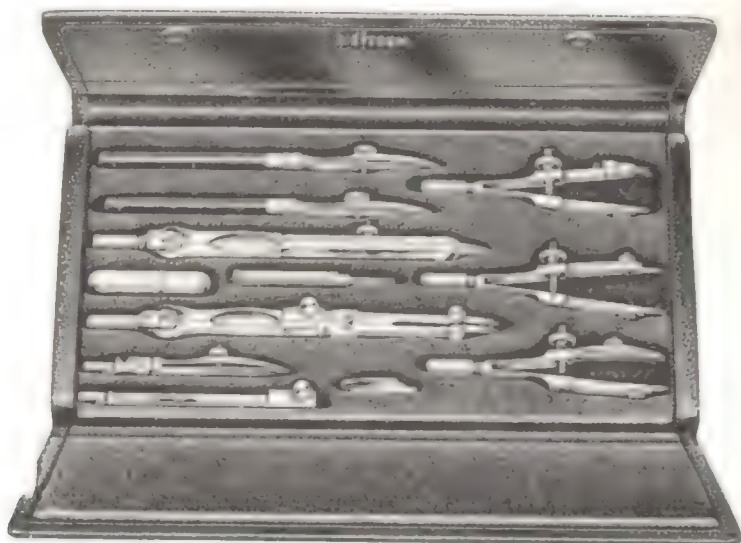
### 6 Instrument Sets

1046. Federal Drawing Instruments, in pocket book case, similar to No. 1047, with No. 648 Ruling Pen omitted, . . . . . Set, \$19.60

NOTE: In stating the number of instruments in a set, accessories and parts are not counted.



## MONARCH DRAWING INSTRUMENTS



1047M

Similar in design and construction to the Federal Drawing Instruments these square (American) type instruments have a definite appeal, as they offer durability and maximum quality at minimum cost. Used extensively by a large number of non-professional users, as well as colleges and universities.

Monarch Instruments are made of polished nickel silver and steel. Fitted and assembled with accuracy and care, these substantially constructed instruments will give years of satisfactory service. Many points of advanced design and great practical value to draftsmen are embodied in Monarch sets.

Pocket book button case, lined with blue velvet.

## 7 Instrument Sets

**1047M. Monarch Drawing Instruments, in pocket book case, containing**

- 648M Ruling Pen, 5 in., unbreakable black handle
- 649M " " 5½
- 722½A Bow Dividers, 3½ in., side screw adjustment
- 722½B " Pencil, 3½
- 722½C " Pen, 3¾ " "
- 794 Hairpin Dividers, 6 in., with new concealed type straightening device, adjustable, reversible and replaceable needle points
- 837 Compasses, 6 in., with new concealed type straightening device, fixed needle point leg, with adjustable reversible and replaceable needle points, interchangeable pencil part, and spring blade pen part; 4 in. lengthening bar
- 2467 Center Tack.
- Combination screwdriver and lead box with extra leads
- Metal box with spare parts
- Flat Key.
- Cleaning and Polishing Cloth, . . . . . Set, \$15.10

**1047MZ. Monarch Drawing Instruments, same as No. 1047, except in zipper case, . . . . . Set, 16.60**

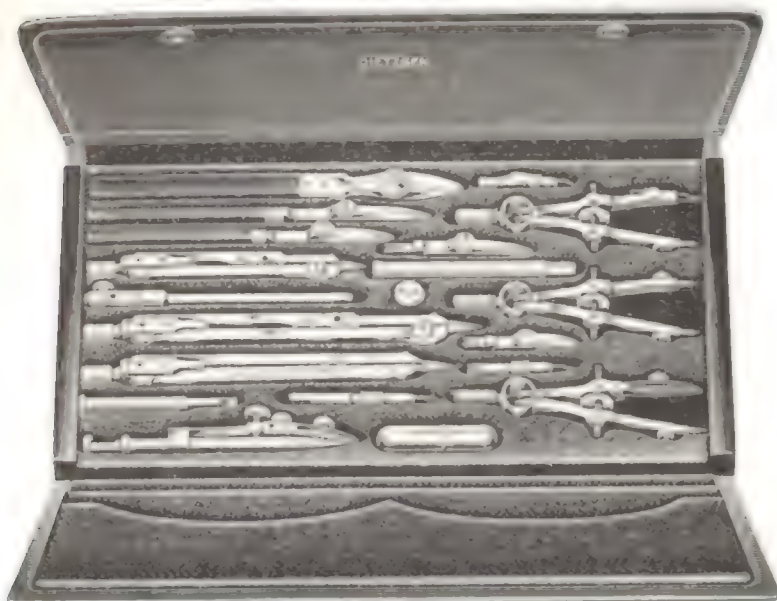
## 6 Instrument Sets

**1046M. Monarch Drawing Instruments, in pocket book case similar to No. 1047M, with No. 648 Ruling Pen omitted, . . . . . Set, 13.10**

NOTE: In stating the number of instruments in a set accessories and parts are not counted.



## KROMET DRAWING INSTRUMENTS



1060KC

Though a comparative new-comer to the Dietzgen Drawing Instrument line, Kromet sets are used extensively in the drafting rooms as well as the class room. Everyone instantly appreciates their many outstanding advantages, features never before obtainable in instruments at such moderate price. Through economies effected by the combination of modern metallurgical science and production methods, we are able to provide in Kromet Drawing Instruments quality at moderate cost.

Kromet flat, round type instruments are substantially constructed, carefully finished and attractive in appearance, with proper care they will give excellent service. They are finished in enduring chromium, imparting a pleasing blue-white surface, non-tarnishable, thus preserving the original flawless appearance.

Pocket book button case, lined with blue velvet.

### 10 Instrument Sets

- 1060KC. Kromet Drawing Instruments, in pocket book case, containing.**
- 652 Ruling Pen, 5 in., with spring blade, ebony handle.
  - 653  $5\frac{1}{2}$  in.
  - 681K Detail Pen, 6 in., ebony handle.
  - 755 $\frac{1}{2}$ A Bow Dividers,  $3\frac{1}{2}$  in., center screw adjustment
  - 755 $\frac{1}{2}$ B Pencil,  $3\frac{1}{2}$  in.
  - 755 $\frac{1}{2}$ C Pen,  $3\frac{1}{2}$  in.
  - 771K Drop Spring Bow Pen and Pencil,  $4\frac{1}{2}$  in., spring blade Pen Part.
  - 798 Hairspring Divider, 6 in., with straightening device, adjustable, reversible and replaceable needle points.
  - 840 Compasses, 6 in., with straightening device, fixed needle point leg, adjustable reversible and replaceable needle points, interchangeable divider, pencil, and spring blade pen part; 4 in. lengthening bar.
  - 874 Compasses,  $4\frac{1}{2}$  in., with straightening device, fixed needle point leg, adjustable, reversible and replaceable needle points, interchangeable divider, pencil and spring blade pen parts.
  - 2467 Center Tack.
  - Combination screwdriver and lead box with extra leads.
  - Combination metal handle and needle box, with extra needle points.
  - Metal Box with spare parts.
  - Cleaning and Polishing Cloth.
- Set, \$21.75  
Set, 23.75
- 1060KCZ. Kromet Drawing Instruments, same as No. 1060K, except in zipper case.**

### 7 Instrument Sets

- 1057KC. Kromet Drawing Instruments in pocket book case, similar to No. 1060KC, except containing No. 874,  $4\frac{1}{2}$  in., Compasses, No. 771K Drop Spring Bow Pen, and No. 681K Detail Pen.**
- Set, \$14.50  
Set, 16.00
- 1057KCZ. Kromet Drawing Instruments, same as No. 1057KC except in zipper case.**

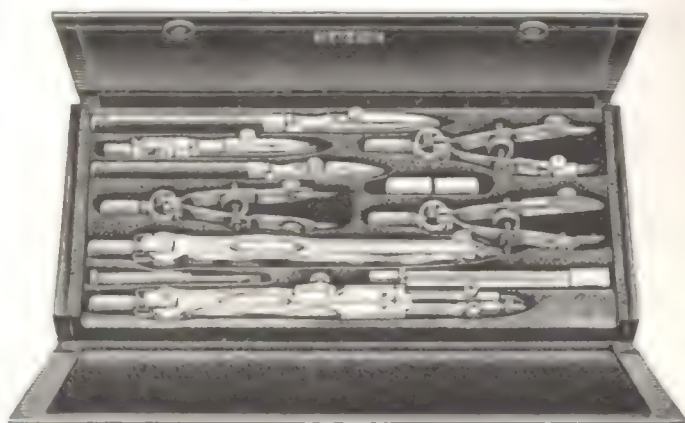
### 3 Instrument Set

- 1053KC. Kromet Drawing Instruments containing: One No. 653 Ruling Pen 5 in., One Special Combination Bow Instrument  $2\frac{1}{2}$  in., with pen, pencil, and divider parts. One No. 840 Compasses 6 in.; combination screwdriver and lead box; combination metal handle and needle box; metal box with spare parts.**
- Set, \$ 8.00





## RELIANCE DRAWING INSTRUMENT SETS



1066R

Designed for the many non-professional users of drawing instruments who require good serviceable instruments at moderate cost. These Trigonol (American) type instruments possess many refinements both as to construction and finish that are usually found only in higher priced instruments. A popular favorite in both high schools and small colleges.

Reliance Instruments are made of rolled nickel silver and steel. All dividers and compasses have straightening devices that are of a remarkably satisfactory quality. This grade should not be confused with other makes which are cast and somewhat similar in appearance but inferior in quality.

Pocket hook button case, lined with velvet.

Catalog Number of Set	1067RCD	1067RC	1067R	1066RC	1066R	1065R	1065RC	1064R
Number of Major Instr. in Set	7	7	7	6	6	5	5	4
<b>Individual Rellance Instruments</b>								
<b>Ruling Pens</b>								
656 Ruling Pen, 5 in., black hdlc.	.....	X	X	.....	.....	.....	.....	.....
657 " 5 1/2 " " "	X	X	X	X	X	X	X	X
681C Detail " 6 " " "	X	.....	.....	.....	.....	.....	.....	.....
<b>Bow Instruments</b>								
723A Bow Dividers, 3 3/4 in., side adj.	.....	.....	X	.....	.....	.....	.....	.....
723B " Pencil, 3 3/4 " " "	.....	.....	.....	X	X	X	X	.....
723C " Pen, 3 3/4 " " "	.....	.....	X	.....	X	X	X	X
<b>Bow Dividers</b>								
737A Bow Dividers, 3 3/4 " center "	X	X	.....	X	.....	.....	.....	.....
737B " Pencil, 3 3/4 " " "	X	X	.....	X	.....	.....	.....	.....
737C " Pen, 3 3/4 " " "	X	X	.....	X	.....	.....	.....	.....
<b>Large Dividers</b>								
801R Large Divider, 6 in., plain.....	.....	.....	.....	X	X	X	.....	.....
803R " 6 " hair spring.	X	X	X	.....	.....	.....	.....	.....
<b>Large Compasses</b>								
844R Large Compass, 6 in.....	X	X	X	X	X	X	X	X
<b>Accessories</b>								
Metal Box with spare parts.....	X	X	X	X	X	X	X	.....
Case, 1000 screws and lead box	X	.....	X	X	X	X	.....	.....
List Price,	\$12.50	\$11.25	\$10.25	\$10.25	\$9.25	\$8.25	\$7.75	\$7.10

\*Set illustrated

NOTE: In stating the number of instruments in a set, accessories and parts are not counted.



## PREP DRAWING INSTRUMENTS



Pocket hook button case, lined with velvet.

\*Set Illustrated.

ROSE TOOLS, INC.

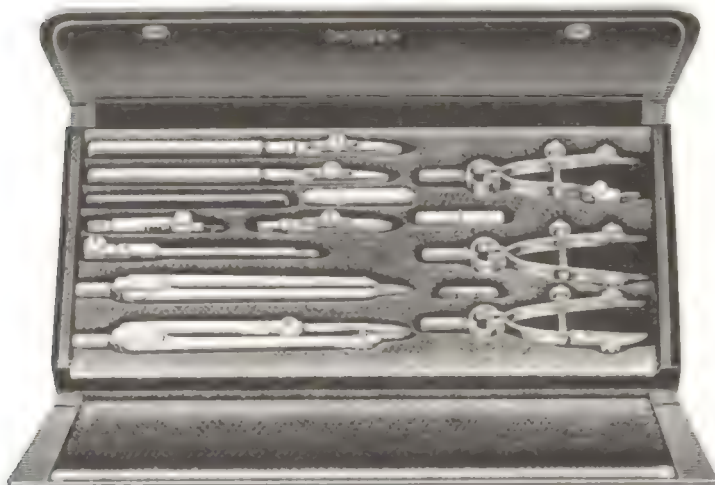
SE TOOLS, INC.  
PRICES SUBJECT TO CHANGE WITHOUT NOTICE







## CONSTRUCTO DRAWING INSTRUMENTS



1097

For the student or one having only occasional need for drawing instruments, these are admirably adapted, being fully guaranteed as to quality and workmanship.

Constructo drawing instruments are made of specially processed hard brass, heavily nickel plated and steel. These instruments are of the flat, round type, the compasses and dividers having straightening devices and various other improvements.

Pocket book button case, lined with velvet.

Catalog Number of Set	1097	1096	1095	1094	1093	1092
Number of Major Instruments in Set	7	6	5	4	3	2
<b>Individual Constructo Instruments</b>						
<b>Ruling Pens</b>						
664AC Ruling Pen, 5 in., Aluminum hdl.	x					
663AC " " 5 1/2 " " " "	x	x	x	x	x	x
<b>Bow Instruments</b>						
749A Bow Divider, 3 1/2 in., side adj.	x	x				
749B " Pencil, 3 1/2 " " " "	x	x	x	x		
749C " Pen, 3 1/2 " " " "	x	x	x	x	x	
<b>Large Dividers</b>						
813 Dividers, 5 1/4 in., plain	x	x	x			
<b>Large Compasses</b>						
858 Compasses, 5 1/4 in., plain	x	x	x	x	x	x
<b>Accessories</b>						
Metal handle for use as separate instrument	x	x	x	x	x	x
Metal Box of spare parts	x	x	x			
Key and lead box with extra leads	x	x	x	x	x	x
List Price	\$4.25	\$5.85	\$5.10	\$4.35	\$3.60	\$2.70

\*Set Illustrated.

NOTE: In stating the number of instruments in a set, accessories and parts are not counted.



## PRACTICAL DRAWING OUTFITS



1100 A

These serviceable outfits meet all the requirements of students taking Engineering and Mechanical Drawing Courses. They are also well adapted for the use of contractors and builders, in making and altering plans. All materials are of dependable quality and will be found very serviceable.

**1100A.** Practical Drawing Outfit in neat heavy pasteboard box, containing the following:

- 1—Drawing Instrument Set No. 1098LC.
- 1—Drawing Board 18 X 24 in.
- 1—T-Square, Maple, Celluloid lined 24 in.
- 1—Triangle 30 X 60°, celluloid, 10 in.
- 1— " 45°, celluloid, 8 in.
- 1—Scale, Triangular, Engine Divided.
- 1—Protractor, celluloid, semi-circular.
- 1—Curve, Celluloid.
- Thumb Tacks, Box of 24.
- 2—Pencils, 1-2H, 1-4H.
- 1—Eraser, 2½ X ½ X ¾ in.
- 1—Artgum, 2 X 1 X 1 in.
- 1—Pencil Pointer, 12 sheets Sand Paper.
- 1—Ink, Dietzgen Black, ¾ oz.
- 6—Drawing Paper sheets, 15 X 22 in. No. 11L.
- 1—Instruction Book on "Use and Care of Drawing Instruments."
- 1—Lettering Chart . . . Set, \$15.00

**1100B.** Practical Drawing Outfit in neat heavy pasteboard box, containing the following:

- 1—Drawing Instrument Set No. 1096.
- 1—Drawing Board 18 X 24 in.
- 1—T-Square, Ash, Maple Lined Blade, 24 in.
- 1—Triangle 30 X 60°, celluloid 8 in.
- 1— " 45°, celluloid 6 in.
- 1—Scale, Triangular, Engine Divided.
- 1—Protractor, celluloid, semi-circular.
- 1—Curve, Celluloid.
- Thumb Tacks, Box of 24.
- 2—Pencils, 1-2H, 1-4H.
- 1—Eraser, 2½ X ½ X ¾ in.
- 1—Artgum, 2 X 1 X 1.
- 1—Pencil Pointer, 12 sheets Sand Paper.
- 1—Ink, Dietzgen Black ¾ oz.
- 6—Drawing Paper sheets 15 X 22 in. No. 11L.
- 1—Instruction Book on "Use and Care of Drawing Instruments."
- 1—Lettering Chart . . . Set, \$10.50

**1100AW.** Practical Drawing Outfit—in neat heavy pasteboard box, like No. 1100A except with Drawing Instrument Set No. 1098LC omitted . . . Set, \$6.50

**1100BW.** Practical Drawing Outfit—in neat heavy pasteboard box, like No. 1100B except with Drawing Instrument Set No. 1096 omitted . . . Set, \$5.00



## PRACTICAL DRAWING OUTFITS



1100 C



**1100C.** Practical Drawing Outfit—in neat heavy pasteboard box containing the following:

- 1—Drawing Instrument Set No. 1095J.
- 1—Drawing Board 16 × 21 in.
- 1—T-Square, Maple, 21 in.
- 1—Triangle 10 × 60°, celluloid 8 in.
- 1—     "     45°, celluloid, 6 in.
- 1—Scale, Triangular, Engine Divided.
- 1—Protractor, Brass Etched Semi-circular.
- 1—Curve, Celluloid.
- 1—Thumb Tacks, Box of 24.
- 2—Pencils, 1-2H, 1-4H.
- 1—Eraser, 2½ × ½ × ¾ in.
- 1—Artgum, 2 × 1 × 1 in.
- 1—Pencil Pointer, 12 sheets Sand Paper.
- 6—Drawing Paper Sheets, 12 × 18 in. No. 11L.
- 1—Instruction Book on "Use and Care of Drawing Instruments."
- 1—Lettering Chart . . . Set, \$7.50

**1100D.** Practical Drawing Outfit—in neat heavy pasteboard box containing the following:

- 1—Drawing Instrument Set No. 1092N.
- 1—Drawing Board 12 × 17 in.
- 1—T-Square, Maple, 18 in.
- 1—Triangle, 10 × 60°, celluloid, 8 in.
- 1—     "     45°, celluloid, 6 in.
- 1—Scale, Triangular, Engine Divided.
- 1—Protractor, Semi-circular, metal
- 1—Thumb Tacks, box of 24.
- 2—Pencils, 1-2H, 1-4H.
- 1—Eraser, 2½ × ½ × ¾ in.
- 1—Artgum, 1½ × 1½ × 1½ in.
- 1—Pencil Pointer, 12 sheets Sand Paper.
- 6—Drawing Paper Sheets, 11 × 15 in. No. 10L.
- 1—Instruction Book on "Use and Care of Drawing Instruments."
- 1—Lettering Chart . . . Set, \$5.00

**1100CW.** Practical Drawing Outfit, in neat heavy pasteboard box like No. 1100C except with Drawing Instrument Set No. 1095J omitted.

Set, \$3.75

**1100DW.** Practical Drawing Outfit—in neat heavy pasteboard box, like No. 1100D, but with Drawing Instrument Set, No. 1092N omitted . . . . . Set, \$3.00





## SCHOOL COMPASS SETS



No. 1102E

**No. 1102E.** School Compass Set consisting of  $4\frac{1}{4}$  inch compass with chuck type pencil leg and pen part, lead box, key and metal handle to be used with pencil and pen parts of compass as separate instruments. Complete in velvet lined rod style pocket case. . . Each, \$0.70

**No. 1102H.** School Compass Set consisting of  $4\frac{1}{4}$ -inch metal handle ruling pen and  $4\frac{1}{4}$ -inch compass with chuck type pencil and pen part, lead box and key. Complete in velvet lined rod style pocket case, . . . Each, \$0.90



No. 1102H



No. 1102N

This School Compass Set consists of a 5-inch aluminum handle ruling pen, 5-inch nickel-plated compass with adjustable needle point leg, with steel divider part, pen part, and pencil part, lead box with extra leads and key, contained in a velvet-lined pocket, rod style case. A compact compass set for making drawings and sketches. Ideal for preparatory schools for use in drawing or science classes.

**No. 1102N.** School Compass Set, . . . . . Each, \$1.60

## STUDENT "SOLID" COMPASSES



No. 1292

The Student "Solid" Compasses are durable and well constructed, and specially adapted for preliminary drawing work in schools, etc. They are made of brass, nickel-plated, and are approximately 5 inches long. A unique feature is a sleeve on the needle point leg, which, when shifted, exposes a recess in which an extra lead is contained.

These compasses have met with considerable favor for school use due to their utility and practical construction.

No. 1292.	Compasses, loose, without lead box, . . . . .	Doz. \$4.80	Each \$0.45
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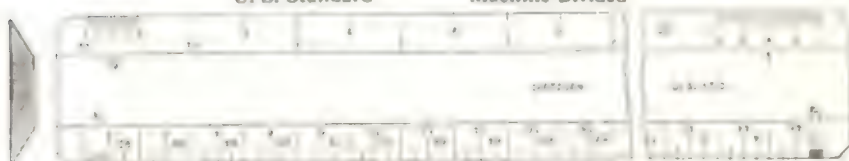


## Section 8

### DRAFTING SCALES FLAT BOXWOOD SCALES

U. S. Standard

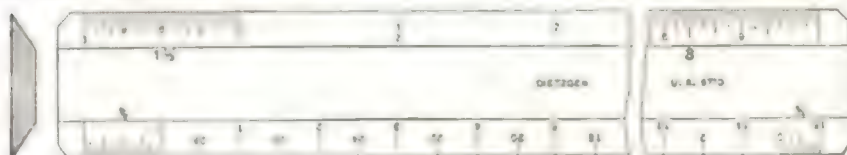
Machine Divided



No. 1356. Open Divided:  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1 inch to the foot.

No. 1356. Flat Boxwood Scale, 12 in.,

Each, \$1.20



No. 1376. Open Divided:  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $1\frac{1}{4}$ , 3 inches to the foot.

No. 1376. Flat Boxwood Scale, 12 in.,

Each, \$1.20



No. 1439. Full divided to  $\frac{1}{16}$  in.

No. 1439. Single Scale, 12 in., divided to  $\frac{1}{16}$  in.,

Each, \$0.55

No. 1439A. " " 12 " "  $\frac{1}{16}$  " "

Each, 0.55

### FLAT WHITE EDGE SCALES

U. S. Standard

Machine Divided

No. 1509. Flat White Edge Scale, 12 in., open divided  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1 in. to the foot, similar to No. 1356 but with white edge,

Each, \$2.00

No. 1517. Flat White Edge Scale, 12 in., open divided  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $1\frac{1}{4}$ , 3 in. to the foot, similar to No. 1376 but with white edge,

Each, \$2.00



No. 1526. Open Divided:  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ ,  $1\frac{1}{4}$ ,  $1\frac{3}{4}$ , 3 in. to the foot.

No. 1526. Flat White Edge Scale, 6 in., both sides beveled and divided, in leather sheath, less than 1 in. wide, very convenient for the pocket,

Each, \$2.20

### FLEXIBLE CELLULOID SCALE

This scale because of its inexpensiveness, compactness, feather weight, and flexibility, has found considerable favor in the school field. It contains the following scales: metric, inch, tenths, eighths and fourths. These dimensions are printed on the celluloid, and while the rule is not as accurate as our engine divided boxwood and white edge scales, it is sufficiently accurate for elementary drawing work.

The rule has also found popularity among the profession as a pocket rule for obtaining approximate dimensions of drawings. Because of its size and weight, it recommends itself as being ideally suited for carrying in the vest pocket.



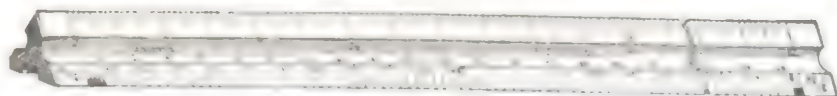
No. 1577

No. 1577. Flexible Celluloid Scale, divided front metric and inches, divided back 10ths, 8ths, 4ths, sold in dozen lots only,

Doz., \$1.20

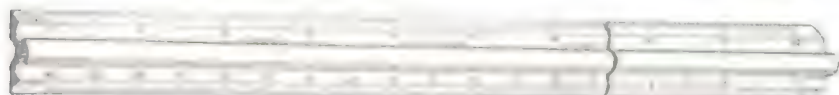


## TRIANGULAR SCALES HARDWOOD Engine Divided For Architects and Mechanical Engineers



No. 1626

Open Divided:  $\frac{1}{8}$ ,  $\frac{1}{16}$ ,  $\frac{1}{32}$ ,  $\frac{1}{64}$ ,  $\frac{1}{128}$ ,  $\frac{1}{256}$ ,  $\frac{1}{512}$ ,  $\frac{1}{1024}$ , 1, 1 $\frac{1}{2}$ , 3 in. to the foot;  $\frac{1}{8}$  in.  
No. 1626. Triangular Hardwood Scale, 12 in., Regular Shape. Each, \$1.30  
No. 31626. Hardwood 12 in., . . . . . Doz., 6.60



No. 41626A

Open Divided:  $\frac{1}{8}$ ,  $\frac{1}{16}$ ,  $\frac{1}{32}$  inch to the inch;  $\frac{1}{8}$  inch.  
41626A. Triangular Type Hardwood Scale, 12 in., with one rounded edge. . . . . Doz., \$6.60

## For Civil Engineers and Surveyors



No. 1636

Divided: 10, 20, 30, 40, 50, 60 parts to the inch.  
No. 1636. Triangular Hardwood Chain Scale, 12 in., Regular Shape. . . . . Each, \$1.30  
No. 31636. Hardwood 12 in., . . . . . Doz., 6.60

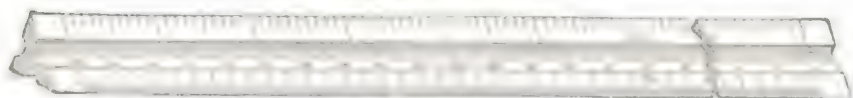
## WHITE EDGE Engine Divided For Architects and Mechanical Engineers



No. 1656

Open Divided:  $\frac{1}{8}$ ,  $\frac{1}{16}$ ,  $\frac{1}{32}$ ,  $\frac{1}{64}$ ,  $\frac{1}{128}$ ,  $\frac{1}{256}$ ,  $\frac{1}{512}$ ,  $\frac{1}{1024}$ , 1, 1 $\frac{1}{2}$ , 3 in. to the foot;  $\frac{1}{8}$  in.  
1656. Triangular White Edge Scale, 12 in., regular shape. . . . . Each, \$3.60

## For Civil Engineers and Surveyors



No. 1667

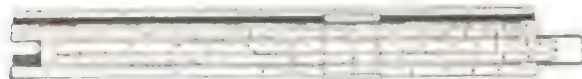
Divided: 10, 20, 30, 40, 50, 60, parts to the inch.  
1667. Triangular White Edge Chain Scale, 12 in., regular shape. . . . . Each, \$3.60





## Section 9

### SLIDE RULES AND PANTOGRAPHS MANIPHASE SLIDE RULE



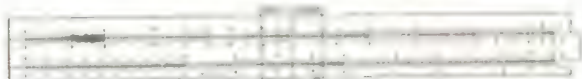
No. 1750P

The Maniphase Slide Rule, of the Mannheim type, has in addition to the regular scales A, B, C and D of the Mannheim, a scale "K" on the face of the rule above the "A" scale, and an inverted single reciprocal scale "CI" on the face of the slide.

The back of the slide has a scale of sines, tangents, and of equal parts which are indexed to be used with the other scales.

- No. 1750P. Maniphase Slide Rule, 10 in., screw adjustment, engine divided on white celluloid, with sine and reciprocal scale. Glass "frameless" indicator. In case, with book of instructions, . . . . . Each, \$6.95
- No. 1750L. Like No. 1750P but in sewed leather case, . . . . . Each, \$7.75

### MANNHEIM SLIDE RULE



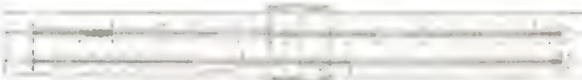
No. 1766P

The Mannheim Slide Rule is sturdily designed, having a range of use sufficient for all ordinary commercial and engineering work.

These rules are made of thoroughly seasoned materials, and accurately divided. The face of the rule and slide has four scales, referred to as A, B, C, and D. The A and B scales are double logarithmic scales. The C and D scales are single logarithmic.

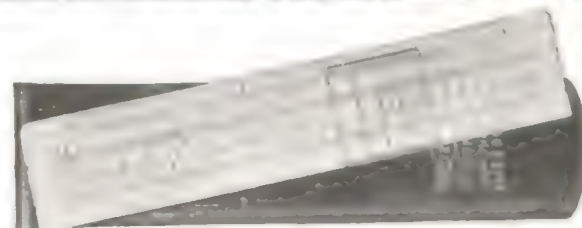
The back of the slide has a sine, a logarithm and a tangent scale, which are indexed to be used with the scales on the face of the rule.

- No. 1760P. Mannheim Slide Rule, 10 inch, engine divided on white celluloid. Glass "frameless" indicator. In case, with book of instructions, . . . . . Each, \$6.20
- No. 1766P. Scholar Slide Rule (Mannheim) 10 inch. Frameless glass indicator, graduations on white enameled wood. In case, with directions, . . . . . Each, \$1.40



No. 1763P

- No. 1763P. Monarch Slide Rule (Mannheim) 10 inch. Frameless glass indicator graduations on white enameled wood. In case, with directions, . . . . . Each, \$2.50



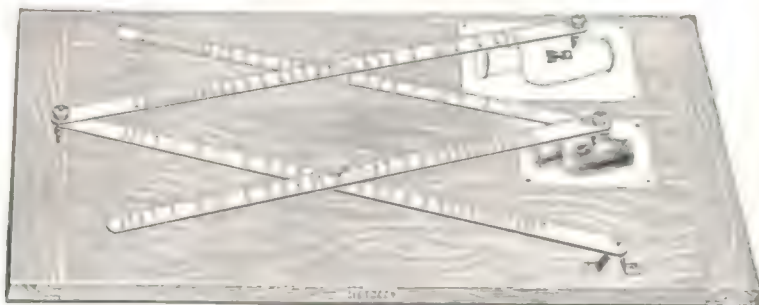
No. 1765P

- No. 1765F. Pocket Slide Rule, (Mannheim), made of thoroughly seasoned white celluloid, accurately divided, measures  $1\frac{1}{4}$  inches wide,  $\frac{1}{2}$  inch thick and  $5\frac{1}{2}$  inches long, overall, with a 5 inch scale on the face. Furnished in soft leather sheath, . . . . . Each, \$2.80
- No. 1765P. Pocket Slide Rule, (Maniphase), white celluloid, mounted on thin boxwood, with frameless indicator. Measures  $1\frac{1}{4}$  inches wide,  $\frac{1}{2}$  inch thick and 6 inches long with a 5 inch scale on the face. Complete in high grade leather sheath with flap, . . . . . Each, \$3.75



## PANTOGRAPHS

For Enlarging and Reducing Drawings  
All Metal Parts Are Nickel-Plated



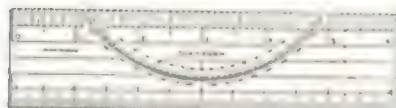
No. 1879

- No. 1879. Pantograph of Polished Hardwood bars, 21 inches long with metal fulcrum; tracer and lead points interchangeable in adjustable tubular holders. For reducing and enlarging in 34 ratios, from 8:1 to 1:8 or vice versa. In box with directions. Each, \$2.50
- No. 1880. Pantograph of Hardwood bars, 21 in. long with metal fulcrum; lead points carried in adjustable tubular holder is interchangeable with the tracer point. For reducing or enlarging in 19 ratios. In box with directions. Each, \$2.00
- No. 1881. Pantograph of Hardwood bars, 17 inches long with metal fulcrum; lead points carried in adjustable tubular holder. For quick and easy enlarging in 12 ratios. This instrument may be used for commercial purposes as well as an excellent means of familiarizing children with forms and proportions, and will greatly assist them in learning to draw from objects. With directions, Each, \$1.00

## Section 10

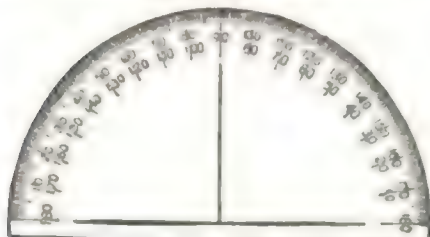
## PROTRACTORS

### COMBINATION PROTRACTOR SCALE AND PARALLEL RULE



No. 1925-12

- No. 1925-12. Combination Protractor, 8ths, 16ths, 32nds, and centimeters. 6 inches long. Flexible transparent celluloid. Combines Scale, Parallel Rule, Compass and Protractor advantages. Each, \$0.25



No. 1928A

## TRANSPARENT CELLULOID PROTRACTOR

### ENGINE DIVIDED

#### Semicircular Celluloid Protractor

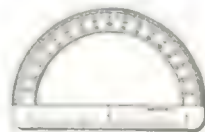
- No. 1928. 4 in., div. to 1°. Doz., \$3.60
- No. 1928A. 5 " " " 1/2°. Each, 0.35
- No. 1928B. 6 " " " 1/2°. Each, 0.40
- No. 11928B. 6 " " " 1/2° (school quality) Doz., 3.75

## ENAMELED METAL PROTRACTORS

- No. 1935G. Semi-Circular enameled metal protractor, 4 inches, divided to Scale on lower edge. Lithographed graduations in black. Doz., \$0.65
- No. 1935H. Same as above, but 4 1/4 inches. Doz., 1.00

## BRASS PROTRACTORS

- No. 1936F. Semi-Circular brass protractor, 3 1/4 inches divided to degrees, numbered every 10° from 0 to 180° in both directions. Scale on lower edge. Graduations stamped in metal. Doz., \$0.80
- No. 1937F. Semi-Circular brass protractor, 3 1/4 inches, divided to degrees, numbered every 10° from 0 to 180° in both directions. Stamped graduations filled in black. Scale on lower edge for convenient classroom use. Doz., \$1.50
- No. 1938E. Semi-Circular brass protractor, 3 1/4 inches divided to degrees, numbered every 10° from 0 to 180° in both directions. Graduations etched in, filled with black. Lacquered to retain their bright finish. Doz., \$1.60



No. 1935G



## TRIANGLES TRANSPARENT CELLULOID



2014

Our transparent triangles are made of a carefully seasoned material that is especially adapted for drawing equipment of this nature. They stand up better, retain their transparency and trueness, and will give greater satisfaction than those made from other materials generally employed for this purpose.

The size of a triangle is determined by the length of its cathetus. To obtain a 30 x 60° triangle and a 45° triangle of even size of hypotenuse, order the 45° triangle about two inches shorter than the 30 x 60° triangle.



2017A

### 30 x 60° PLAIN

			3 in.	4 in.	5 in.	8 in.	10 in.	12 in.	14 in.
2014.	First quality	.060 in. Each		\$0.25	\$0.35	\$0.45	\$0.70	\$0.95	
12014.	School "	.060 " Doz.		2.30	3.20	4.10	5.80	8.80	

### 45° PLAIN

2015.	First quality	.060 in. Each	\$0.25	\$0.30	\$0.40	\$0.65	\$1.00	\$1.45	
12015.	School "	.060 " Doz.	2.65	3.60	5.00	9.20	13.90		

### 30 x 60° WITH FINGER LIFTS

			3 in.	4 in.	5 in.	8 in.	10 in.	12 in.	14 in.
2016A.	First quality	.060 in. Each		\$0.30	\$0.40	\$0.50	\$0.75	\$1.05	
2016B.	" "	.080 " "		0.35	0.50	0.60	0.85	1.15	\$1.85
2016C.	" "	.090 " "		0.50	0.65	0.75	1.05	1.35	2.05
12016A.	School "	.060 " Doz.		3.10	4.20	5.30	7.70	10.60	

### 45° PLAIN

2017A.	First quality	.060 in. Each	\$0.30	\$0.35	\$0.45	\$0.70	\$1.10	\$1.55	
2017B.	" "	.080 " "	0.40	0.45	0.60	1.00	1.20	1.70	\$2.55
2017C.	" "	.090 " "	0.45	0.55	0.75	1.25	1.50	2.00	2.90
12017A.	School "	.060 " Doz.		3.40	5.20	7.50	11.50	16.50	

## LETTERING DEVICES

2027-5. "Edco" Lettering Angle, transparent celluloid, 5 in. high with a 3 in. base, having a 67 1/2° slope; specially made for lettering in schools. Doz., \$3.75

This is a convenient, inexpensive angle for use in constructing guide lines for lettering. It has gained considerable popularity in elementary and high schools and has been found to be very practical.

2028. Lettering Triangle. Celluloid. A 6 in. 45° triangle, one 45° angle has been cut away to form an angle of 67 1/2°. A number of oblong beveled slots permit the insertion of a sharply pointed pencil for the purpose of drawing horizontal lettering guide lines. Capital letters of any size from 1/16 to 1/2 inch are provided for, as well as lower case letters two-thirds the size of capitals. Provision is made for standard and close spacing between letters, . . . . . Each, \$1.10

All lettering angles except the 4 inch, 45° and 5 inch, 60° have a 67 1/2° slot which is useful in obtaining a uniform slope in lettering.



2027-5



2028





## LETTERING ANGLES AND DEVICES DRAFTSQUARE



2029

2029. Draftsquare, Transparent Celluloid, .045 in. thick  
 $4\frac{3}{4} \times 4\frac{3}{4}$  in. . . . . Each, \$1.00

The Draftsquare was created to simplify the work of the draftsman and student. The Draftsquare permits the outlining of all standard bolt heads  $\frac{1}{4}$  to 1 in. diameter, circles from  $\frac{1}{2}$  to 1 in. diameter; and American Standard "V" thread of 60°, and the Acme thread 29. Holes for drawing lettering guide lines for various sized letters at 60° or 75 $\frac{1}{2}$ ° inclination are also provided.

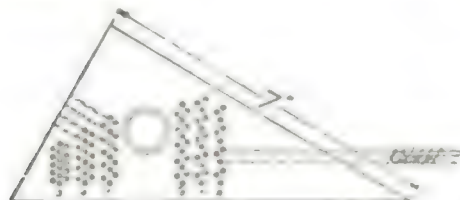
## CELLULOID CHEMISTRY STENCIL

2159. Chemistry Stencil, transparent celluloid,  
 6 in.  $\times$  3 in.  $\times$  .030 in. thick. Handy,  
 convenient size to carry in note book or  
 vest pocket, . . . . . Each, \$0.25

A handy templet for the Chemistry student. Speeds up illustrating laboratory problem notes, at the same time increasing legibility. Contains templet cut-outs of flasks, beakers, Bunsen burners, etc. Made of flexible, transparent celluloid, 6  $\times$  3  $\times$  .030 in., of convenient size to carry in note-book or vest pocket. Millimeter scale on edge.



No. 2159

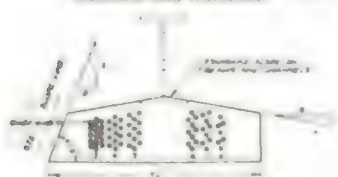


No. 2030B

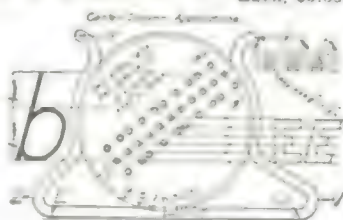


No. 2031R

- |            |  |        |      |      |              |
|------------|--|--------|------|------|--------------|
| No. 2030B. | Lettering Angle, transparent Celluloid, 30° $\times$ 60°, size 5   | 6      | 7    | 8    | 9 in         |
| Each,      |  | \$0.70 | 0.75 | 0.80 | 1.00         |
| No. 2031B. | Lettering Angle, transparent Celluloid, 45°, size 4  | 5      | 6    | 7    | 8 in.        |
| Each,      |  | \$0.70 | .75  | .75  | .90          |
| No. 2031C. | Lettering Angle, transparent Celluloid, 45°, 8 in. This angle has a triangular center opening useful in drawing the slope of the flange of standard I-beams and channels.  |        |      |      | Each, \$0.90 |
| No. 2031R. | Lettering Angle, transparent Celluloid, 45°, 6 in. This angle has in addition, a special group of holes designed primarily to aid in teaching as well as drawing systematic dimension lines, also guidelines for dimension figures both whole numbers and fractions. |        |      |      | Each, \$0.85 |



No. 2031D  
Lettering Device



No. 2032  
Ames Lettering Device

- 2031D. Lettering Device. Transparent celluloid, 5 $\frac{1}{2}$  in. base, with one vertical slot 1 $\frac{1}{2}$  in. long. A thin slot of .017 in. for tracing the slope of letters. The top slopes up from both sides to the center, with a degree of slope equal to that of the standard slope of I-beams and Channels and has holes located to give a quick and easy means of making accurately spaced guide lines for lettering. . . . . Each, \$0.40

2032. Ames Lettering Device, with instruction sheet. The only instrument of its kind that allows the user to vary the heights of lettering by adjustment of the flid or the slope lines can be drawn without any adjustment of parts, . . . . . Each, \$1.10



## Section 12 T SQUARES

Realizing the importance of trueness and durability in T Squares, we use in their manufacture only the most carefully selected and thoroughly seasoned stock, the stock being seasoned by a special process. This fact, combined with perfect workmanship and finish, results in these articles being of acknowledged accuracy and of unsurpassed quality.



2060

### Maple Blade and Head: Fixed Head.

2060.	Size.	16 in.	18 in.	21 in.	24 in.	30 in.	36 in.	42 in.	48 in.
	Each.	\$0.60	\$0.65	\$0.70	\$0.80	\$0.95	\$1.15	\$1.40	\$1.90

12060.	Size (School Quality).	18 in.	21 in.	24 in.	30 in.	36 in.
	Dos.	\$5.00	\$5.50	\$6.00	\$7.00	\$9.60



2066

### Ash, Maple Lined Blade, Ebonized Head: Fixed Head.

2066.	Size.	24 in.	30 in.	36 in.	42 in.	48 in.	60 in.	72 in.
	Each.	\$1.45	\$1.70	\$2.00	\$2.45	\$3.20	\$5.20	\$6.90

12066.	Size (School Quality).	24 in.	30 in.
	Dos.	\$11.60	\$13.00



2077

### Maple, Transparent Celluloid Lined Blade and Ebonized Head: Fixed Head.

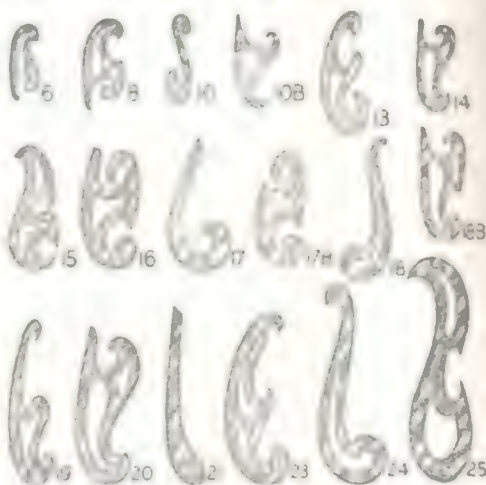
2077.	Size.	18 in.	24 in.	30 in.	36 in.	42 in.	48 in.	60 in.
	Each.	\$2.10	\$2.50	\$2.90	\$3.20	\$3.80	\$4.80	\$8.80

12077.	Size (School Quality).	18 in.	24 in.	30 in.	36 in.	42 in.
	Dos.	\$22.00	\$25.00	\$30.00	\$36.00	\$44.00



## Section 13 TRANSPARENT CELLULOID CURVES

2152. Transparent highly polished	Celluloid	Curves,
Nos.		Each
6		\$0.55
8		.55
10		.50
10B		.55
11		.70
14		.65
15		.75
16		.70
17		.70
17B		.70
18		.70
18B		.70
19		.85
20		1.10
21		.70
23		1.20
24		1.20
25		1.85



No. 2152

12152. Transparent (School Quality).	Celluloid	Curves,
Nos.		Doz.
6		\$4.40
8		5.30
13		7.70
15		7.70
16		7.70
18		6.80

## Section 14 THUMB TACKS

### SIMPLEX BRASS

### ROUND HEADS

Packed 100 in Lock Top Tin Box

No. 2434	No. 2435	No. 2436

		Box of 100	Carton 10 Boxes
2434. $\frac{3}{8}$ in. diam.,		\$0.30	\$2.70
2435. $\frac{1}{2}$ in. diam.,		.40	3.60
2436. $\frac{5}{8}$ in. diam.,		.50	4.50

### STAMPED STEEL THUMB TACKS

Stamped steel thumb tacks are made of one piece of nickel plated hard steel, and are of the best quality. They have needle finished points, and are unequalled as a low priced substitute for the regular thumb tacks.

No. 2440. $\frac{3}{8}$ inch diam.	No. 2441. $\frac{1}{2}$ inch diam.	No. 2442. $\frac{5}{8}$ inch diam.
Box of 100		
No. 2440.	No. 2441.	No. 2442.
$\frac{3}{8}$ inch diam.	$\frac{1}{2}$ inch diam.	$\frac{5}{8}$ inch diam.
.50	.55	.60
Box of 1000		
No. 2443-1.	No. 2443-2.	No. 2443-3.
$\frac{3}{8}$ inch diam.	$\frac{1}{2}$ inch diam.	$\frac{5}{8}$ inch diam.
.85	1.10	1.40



No. 2441A

2441A. Stamped Steel Thumb Tacks, $\frac{1}{2}$ in., nickel plated, 16 tacks in tin, packed 25 tins to carton.	Carton, \$3.30
2444D. Stamped Steel Thumb Tacks, $\frac{5}{8}$ in., nickel plated, 24 tacks in tin, packed 25 tins to carton.	Carton, 1.80

### COMMERCIAL STEEL THUMB TACKS

The Commercial Steel Thumb Tacks are made very strong and heavy. They are very serviceable for a low-priced article.

No. 2450	No. 2451	No. 2452

Packed 100 (loose) in round wooden box.		
No. 2450. Round Heads, $\frac{3}{8}$ inch diam.,	Box of 100,	\$0.30
No. 2451. Round Heads, $\frac{1}{2}$ inch diam.,	" " "	.35
No. 2452. Round Heads, $\frac{5}{8}$ inch diam.,	" " "	.40





## Section 15

### DRAWING INKS

#### DIETZGEN LIQUID DRAWING INKS

The absolute uniformity of Dietzgen ink and its dense, smooth flowing, quick and evenly drying qualities are steadily increasing its popularity. Put up in new style bottle with bell shaped neck insuring close fitting of stopper. Stopper has angular steeple to prevent rolling.



$\frac{1}{4}$ -oz. bottles.

2681.	Dietzgen Waterproof, Black	Each, \$0.25
2682.	" " Yellow	.25
2683.	" " Orange	.25
2684.	" " Scarlet	.25
2685.	" " Carmine	.25
2686.	" " Blue	.25
2687.	" " Green	.25
2688.	" " Brown	.25
2689.	" " Brick Red	.25
2690.	" " Vermilion	.25
2691.	" " Violet	.25

Can also be furnished in 4 oz., 8 oz., 16 oz., and 32 oz. bottles. Write for prices

#### HIGGINS LIQUID DRAWING INKS

2681	Higgins Waterproof Black Ink, $\frac{1}{4}$ oz. bottle,	Each \$0.25	Doz. \$3.00
2741.	Waterproof Black Ink, dropper stopper, $\frac{1}{4}$ oz. bottle,	.25	3.00
2731B.	Waterproof Colored Inks in the following colors: Blue, Black, Red,		
2732.	Brown, Carmine, Red, Green, Sea Green, Indigo, Leaf, Orange, Red, Orange		
	Red, Red Violet, Russet, Turquoise, Violet, Yellow, Orange Yellow, White,	.25	3.00
	Neutral Tint,		

Can also be furnished in 8 oz., 16 oz. and 32 oz. bottles

#### EMPTY INK BOTTLES

2692.	Empty Ink Bottles, $\frac{1}{4}$ oz.	Doz. \$0.50
2694.	with Stoppers and Quills,	1.10

#### INK BOTTLE STOPPERS

2693.	Stoppers with quills,	Doz. \$0.60
2694B.	Water Dropper Stopper,	Each. .10

#### INK BOTTLE HOLDERS



2740



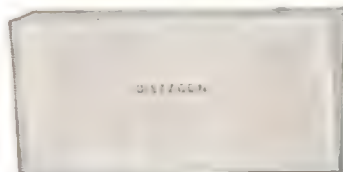
2741

2740.	Iron Ink Bottle Holder and Paper Weight, threaded top, black enameled finish, weight about 12 oz.	Each, \$0.85
2741.	Ebono-Noxal Ink Bottle Holder, made of molded rubber having considerable gripping qualities which enable it to be used on an inclined drawing board without danger of slipping. is also designed as a rest for pens, pencils, etc.,	Each, \$ .65

## Section 16

### BEST TEST RUBBER CEMENT

2799.	Best-Test White Rubber Paper Cement.						
	In cans, . . . . .	Gal.	Qt.	Pt.	$\frac{1}{2}$ Pt.	4-oz. w/brush	2-oz. Tubes
	Each, . . . . .	\$3.50	\$1.25	\$0.65	\$0.35	\$0.25	\$0.15



2894

#### CARBORUNDUM SHARPENING STONE

Excellent for sharpening ruling pen nibs, compass and divider points, and steel erasers.

2894.	Carborundum Stone, wedge shape slip,	
	$\frac{3}{8} \times 2\frac{3}{4}$ in., . . . . .	Each, \$0.50



## Section 17 PENCILS



No. 3139

Dietzgen Pencils are exceptionally uniform, only the purest graphite being used and the pencils being manufactured by a special process insuring perfection and remarkable lasting quality.

- No. 3091. Dietzgen's Excello Pencils, Hexagon, Yellow Polish, Gold stamped. In following degrees: 2B, B, HB, F, H, 2H, 3H, 4H, 5H. Doz., \$0.90
- No. 3138. Dietzgen's Hyperion Pencils, Hexagon, Yellow Polish, Silver stamped. In following degrees: 2B, B, HB, F, H, 2H, 3H, 4H, 5H. Doz., \$0.60
- No. 3139. Dietzgen's Designo Drawing Pencils. This pencil is very popular because of its low price and good quality. Hexagon, Yellow Polish. In the following degrees: HB, H, 2H, 3H, 4H, 5H. Doz., \$0.60
- No. 3093. Eldorado Pencils, Hexagon, Yellow Polish, Gold Stamped. In degrees as follows: 6B, 5B, 4B, 3B, 2B, B, HB, F, H, 2H, 3H, 4H, 5H, 6H, 7H, 8H, 9H. Doz., \$1.00
- No. 3102. Venus Pencils, Hexagon, Dark Green Polish, Gold Stamped. In degrees as follows: 6B, 5B, 4B, 3B, 2B, B, HB, F, H, 2H, 3H, 4H, 5H, 6H, 7H, 8H, 9H. Doz., \$1.00

We also carry a complete line of Castell and Kohinor Pencils.

## COMPASS LEADS

- No. 3165. Compass Leads for Drawing Instruments, 1 1/4 in. long with chisel point, for compasses, bow pencils, etc., in H, 2H or 4H degrees. Packed 6 leads of one degree in tube. Per Tube, \$ 0.10
- No. 3165B. Box of 12 tubes of No. 3165. Per Box, 1.00
- No. 3165D. Carton of 12 boxes of No. 3165B. Per Carton, 12.00

## PENCIL POINTERS



No. 3208

This Pencil Pointer is a combination article. The pencil is pointed on the emery paper pad and the point smoothed by drawing through the velvet-lined slots shown in illustration. Slots on back are for cleaning rubber erasers rapidly and effectively. The emery pad is removable, and a new pad can be quickly inserted.

- No. 3208. Improved Pencil Pointer and Eraser Cleaner, with handle, emery paper pad 1 1/4 x 3 1/4 in., 12 sheets. Each, \$0.30

- No. 3208P. Extra Pads, emery paper, for No. 3208, Each, \$0.10

## SANDPAPER

- No. 3212. Pencil Pointer, 1 1/4 x 4 in., 12 sheets. Each, \$0.10
- No. 3213. Pencil Pointer, 1 1/4 x 4 in., 12 sheets with handle. Each, \$0.15
- No. 13213. Pencil Pointer, 1 1/4 x 4 in., 12 sheets with handle (School Quality). Doz., \$1.20

## EMERY PAPER

- No. 3220. Pencil Pointer, 1 1/4 x 4 in., 12 sheets, with handle. Each, \$0.20
- No. 13220. Pencil Pointer, 1 1/4 x 4 in., 12 sheets, with handle (School Quality). Doz., \$1.60

## 4 in 1 MULTI FILE

- No. 3222. 6 in. long, can be used as pencil file, eraser cleaner, tack lifter and paper knife. Inexpensive. Practical and indestructible. Each, \$0.30



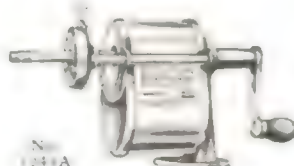
No. 3224

## No. 3222 PENCIL POINTER FILE

- No. 3224. Pencil Pointer File and Tack Lifter, 6 1/2 in., Ea., \$0.50

## PENCIL SHARPENERS

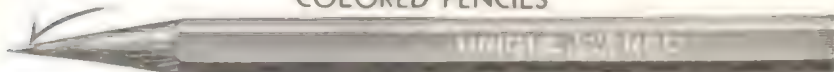
- No. 3242A. Chicago Giant Pencil Sharpener, with twin milling cutters, will sharpen any size pencil or crayon. Automatically stops cutting when point is produced. Each, \$1.50
- No. 3243A. Boston Self-Feeding Sharpener, with "draftsmen's cutters," removing the wood only from the pencil, leaving the graphite exposed so that it may be sharpened to suit the draftsman's preference. Each, \$2.75



No. 3243A



## COLORED PENCILS



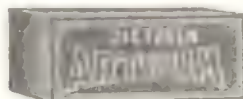
No. 3264B

The Unique Colored Pencils have a thin diameter lead, the same as writing pencils, which makes them especially adapted for use in writing, checking, figuring, proof reading, marking blue prints, etc. Fine and accurate colored lines, etc. Ideal for auditors, bookkeepers, draftsmen, executives, teachers and students. The pencils are of high quality lead, handy hexagon shaped, light in weight, easy to sharpen, and can be erased readily.

No. 3264B.	Unique, Red	lead of thin diameter, Hexagon,	Gross, \$9.50	Doz., \$0.90
No. 3264C.	Blue		9.50	0.90
No. 3264D.	Yellow		9.50	0.90
No. 3264E.	Green		9.50	0.90
No. 3264F.	White		9.50	0.90
No. 3264M.	Maroon		9.50	0.90
No. 3264-7.	Unique Assortment, containing one each Blue, Red, Green, Yellow, Brown, White and Violet Colored Pencils,			Box, \$0.60
No. 3264-12.	Unique Assortment, containing one each Blue, Red, Green, Yellow, Brown, White, Purple, Black, Orange, Light Blue, Pink, and Light Green Colored Pencils,			Box, \$1.00
No. 3264-24.	Unique Assortment, containing one each Blue, Red, Green, Yellow, Brown, White, Purple, Black, Orange, Light Blue, Pink, Light Green, Vermilion, Ultramarine Blue, Chrome Yellow, Field Green, Sepia, Maroon, Ochre, Olive Green, Mauve, Violet, Grey and Dark Red Colored Pencils, including one Pencil Holder,			Box, \$2.00

## Section 18 ERASERS

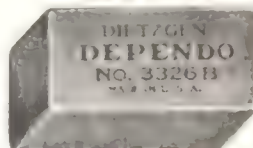
	Each	Doz.
No. 3324A. Art Gum $1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	\$0.05	\$0.50
No. 3324B. " " $2 \times 1 \times 1$	0.07	0.65
No. 3324C. " " $2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	0.10	1.00



No. 3324B

Dependo is exceptionally soft and smooth, will not scratch the surface and does not crumble. Especially adapted for cleaning drawings of all kinds. Can be used on freshly inked lines without affecting their blackness and intensity

No. 3326B. Dependo. Size $2 \times 1 \times \frac{1}{2}$	\$0.10	\$1.00
No. 3326D. " " $3 \times 1\frac{1}{2} \times 1\frac{1}{2}$	0.20	1.90



No. 3326B

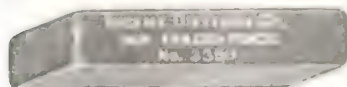
No. 3332-24D. Viridian Eraser. Green.	
$3\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$ . One doz.	
to box,	Box, \$0.75

No. 3333-24D. Maroon Eraser. Red.	
$3\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$ . One doz.	
to box,	Box, \$0.75



No. 3333-24D

No. 3337B. Dietzgen Pliable Eraser $1\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$	Doz., \$0.45
No. 3337C. " " $2\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$	Doz., 0.75



No. 3359

No. 3359. Ink and Pencil Eraser,  $2\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$ ,

No. 3338. Dietzgen Verrine Eraser. Green,	
beveled. $2\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$ .	Doz., \$0.50

No. 3339. Dietzgen Rubric Eraser. Red,	
beveled. $2\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$ .	Doz., \$0.50
	Doz., 0.50

## ERASING SHIELDS

No. 3391. Nickel silver, highly polished.	
$2\frac{1}{2} \times 3\frac{1}{2}$ in.,	Each, \$0.15
No. 3392. Safety Razor Steel, very thin and durable,	
$2\frac{1}{2} \times 3\frac{1}{2}$ in.,	Each, \$0.25



No. 3391

No. 3392A. Safety Razor Steel, highest quality, new Easy Grip feature, of upset flanged finger grip holes providing against slipping.  $2\frac{1}{2} \times 4\frac{1}{2}$  in., Each, \$0.30



No. 3392A





## Section 19 PENS AND PEN HOLDERS

### DIETZGEN STEEL PENS

Dietzgen Drawing and Lettering Pens No. 3440 and Crow Quill Pens No. 3442 are designed especially for drawing and lettering on drawing paper. For this work they will be found superior to other makes, as they possess great elasticity, have longer nibs and not too sharp points, permitting rapid work without scratching or catching on the grain of the paper.

No. 3440. Dietzgen Drawing and Lettering Pens, - Box of 12, \$0.50

No. 3442. Dietzgen Crow Quill Pens, Card of 12 with holder, .70  
Box of 12, .50

No. 3443. Dietzgen Crow Quill Pens, Card of 12 with holder, .70

No. 3447. Dietzgen Crow Quill Pens No. 3443, with improved holder having cork finger piece, Card of 10, \$1.20. Each, \$0.12



No. 3440 No. 3442



3453 3454 3455 3456 3457  
Illustrations 1/2 Size

### GILLOTT STEEL PENS For Drawing and Lettering

No. 3453. Gillott Lettering Pens (No. 300) loose, Doz. \$0.75  
No. 3454. Gillott Mapping Pens (No. 291) loose, Doz. .75  
No. 3455. " " " ( " 170) " " .20  
No. 3456. " " " ( " 303) " " .20  
No. 3457. " " " ( " 404) " " .15

We stock a full line of Gillott Pens.

### WOODEN PENHOLDERS

No. 3468. Thin, 5 in., brown enamel finish, for No. 3440, .06 Each, \$0.06  
No. 3470. Thick, 5 in., brown enamel finish, for No. 3442, .07 Each, .07  
No. 3471. Medium, 7 in., natural finish, for Nos. 3443-3447, .05 Each, .05  
No. 3475. Thick, 7 in., natural finish, cork tip, for Nos. 3455-3457, .06 Each, .06

### HENRY TANK PENS

An exceptionally useful lettering pen. By means of a patented device a reservoir is created which holds the surplus quantity of ink thus allowing continuous lettering without the constant bother of replenishing the supply. This patented feature can be easily released, as shown by the dotted line in the illustration, for cleaning pen.



No. 3523-4

No. 3523-4. Henry Tank Pen (Mfg. No. 4) fine point drawing and lettering pen, Per Doz., \$0.75 Per Gro., \$7.20  
No. 3523-5. Henry Tank Pen (Mfg. No. 5) medium point drawing and lettering pen, Per Doz., \$0.75 Per Gro., 7.20  
No. 3523-12. Henry Tank Pen (Mfg. No. 12) fine point lettering and writing pen, Per Doz., \$0.75 Per Gro., 7.20  
No. 3523-15. Henry Tank Pen (Mfg. No. 15) medium point lettering and writing pen, Per Doz., \$0.75 Per Gro., 7.20

### SPEEDBALL PENS

Illustration Approx. 1/4 Size



No. 3525A

No. 3525B

No. 3525C

No. 3525D

Packed one dozen and one number to a box

No.	Doz.	No.	Doz.
3525A-0 Speedball Lettering and Drawing	\$0.90	3525D-0 Speedball Lettering and Drawing	\$0.90
1 Pens, Style "A", square tip for	.90	1 Pens, Style "D", oval tip for Bold	.90
2 square Gothic and block letters,	.90	2 Roman Text, and Italics	.90
3	.90	3	.90
4 (See illustrations above	.90	4 (See illustrations above	.90
5 for Width of Lines)	.90	5 for Width of Lines)	.90
3525B-0 Speedball Lettering and Drawing	.90	3526A. Set of Speedball Pens containing	
1 Pens, Style "B", round tip for	.90	one each Style "A", Numbers 0	
2 round Gothic or uniform lines,	.90	to 5, Per Set, \$0.45	
3	.90	3526B. Set of Speedball Pens containing	
4 (See illustrations above	.90	one each Style "B", Numbers 0	
5 for Width of Lines)	.90	to 5, Per Set, .45	
3525C-0 Speedball Lettering and Drawing	.90	3526C. Set of Speedball Pens containing	
1 Pens, Style "C", oblong tip for	.90	one each Style "C", Numbers 0	
2 Roman Text, and shaded Italics	.90	to 5, Per Set, .45	
3	.90	3526D. Set of Speedball Pens containing	
4 (See illustrations above	.90	one each Style "D", Numbers 0	
5 for Width of Lines)	.90	to 5, Per Set, .45	



## Section 20

### MISCELLANEOUS DRAFTING MATERIALS DRAFTING TAPES



No. 3842C

#### Scotch Holdfast Drafting Tape

Especially made for drafting purposes, consisting of a one-inch strip of prepared paper tape with a special adhesive. Descriptive circular with directions for use in each carton.

No. 3842C. 1 in. wide, 10 yards in carton,  
No. 3842H. 1 72

Each, \$0.25  
Each, 1.60

#### Scotch Cellulose Tape

3844B. Scotch Cellulose Tape in Utility Dispenser, 180 in.  
12 rolls in carton, Carton, \$1.80  
3845BC. Scotch Cellulose Tape in Utility Dispenser, 180 in.  
12 rolls in carton, Carton, 2.40

### TRIPLE DUTY STAPLER

The name "triple duty" indicates that the machine can be used, first, for stapling papers, yet a second, for fastening (or pinning) papers together temporarily by a staple the ends of which are bent out, rather than clinched in, so that it may be removed easily, yet will hold papers together. Third, as a light duty tacker for fastening drawing paper to drawing board, posting notices and other miscellaneous tacking jobs.

No. 4208. Triple Duty Fastener and Stapler for stapling, pinning and tacking. Equipped with special auto-lock feature. Each, \$1.75  
No. 4208S. Triple Duty Staples for use with Triple Duty Stapler.  
Packed 1000, \$0.35 Carton 10,000 \$2.90



No. 4208

### DUSTING BRUSHES

For removing crumbs of Rubber, etc., from Drawings and Boards.

No. 4209. Dusting Brush, staple set in hardwood, 8 1/2 in. brush, bristles 2 in., handle 6 in., Each, \$0.50

No. 4211A. Dusting Brush, finest quality, 2 1/2 inch white bristle, staple set in hardwood, with 5 inch handle, 13 inches over-all in length. It is of a flat beveled style which allows the brush to lay flat or to be placed in a drawer or in a pigeon hole, Each, \$0.90



No. 4211A

### TRIMMING SHEARS

Specially adapted for trimming drawings, tracings, blue prints, etc. Of perfected design, improves work, has long thin blades of perfect temper and true cutting edges. Japanned handles, nicked blades. Fully warranted to remain sharp longer, cut easier and outwear any other make.

No. 4212A. Trimming Shears, 14 in. long, cutting edge 8 1/2 in. long, Each, \$3.75  
No. 4212B. 15 10 1/2 4.50

### INGENTO CUTTERS

For Card and Paper Cutting



No. 4214-5

The bed is seasoned birch, as wide as is it long. The supporting cleats are mitered into the bed to prevent warping. The bed is subdivided into half-inch squares except Nos. 3 1/2 and 6 and is finished perfectly and highly polished. Across the top of the bed and set at right angle to the cutting edge is a rule with one-eighth inch graduations. The blades are of high grade tool steel, properly tempered to insure a perfect cutting edge.

Sizes No. 3, 5 1/2, and 6 have a metal frame to which the lower blade is attached. This frame is part of the fastening, making it impossible for the relative position of the blades to change. These three cutters also have springs which hold the handle at any desired height. This is an important improvement for the large size.

Handles and metal bases are finished in black enamel, baked on. The spring joint is so constructed that the movable blade and board blade come together at the point of cutting as do shears. This results in clean-cut edges every time.

No. 4214-1.	Ingento Paper Cutter, 6 1/2 in. blade	Each, \$2.50
4214-2.	8 1/2	3.00
4214-3.	10 1/2	3.75
4214-4.	12 1/2	6.00
4214-5.	15	11.00
4214-5 1/2.	18	17.50
4214-6.	24	27.50

### AIR-TIGHT METAL TUBES

These tubes are made of tin with air tight covers. Excellent for keeping rolls of prepared papers and cloths dry and dust. Besides being valuable as storage tubes, they are excellently adapted for filing purposes. The handles are slotted to receive an index card furnished with each tube. The compactness, convenience, flexibility and protective value of such a file, and the fact that it can be taken set up or changed to any convenient place, has made this filing system very popular in the drafting room.

No. 4222B. Metal Tube, 37 in. long, 3/4 in. diameter for 50 yard roll, Each, \$1.80  
No. 4224B. 37 2 1/4 10 1.40



## Section 21

## BLUE PRINTING EQUIPMENT

DIETZGEN BLUE PRINTING EQUIPMENT for the classroom is essential to both the student and instructors.

Dietzgen Junior Vertical Electric Printing Machine prints clear, sharp, distinct prints with great economy. The Junior has the same sturdy construction and other outstanding features which have made Dietzgen Senior equipment so satisfactory. The machine has a half cylinder of glass with an open printing surface of 24 x 40 inches; glass is held in a felt lined metal frame.

**ROLLER CURTAIN**—The tracing and sensitized paper are held in place by Roller Curtains. Rollers hold curtain at uniform tautness over the entire surface of the glass.

**HI-POWER ARC LAMP**—The specially designed Hi-Power Arc Lamp gives off an intense heat, rich in printing qualities. It consumes 12 amps. on 110 or 220 volts, 50 cycle A. C. and 25 amps. on 110 at 220 volts, D. C. An aluminum reflector insures the best possible distribution of light.

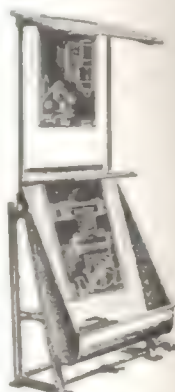
**SPEED REGULATOR**—An improved pneumatic Speed Regulator insures uniform speed in the descent of the lamp. It is noiseless in operation, absolute in its regulation, and provides for a wide range of speed.

**AUTOMATIC CUT-OFF**—Automatically extinguishes the light at any desired point. This permits machine to be loaded, set in operation, and left unattended, without possibility of prints becoming over-exposed.



No. 4334-1

- 4334-1A. Height, 83 in. Occupies 18 X 22-in. floor space. Finish, beautiful brown, enamel frame. Printing surface sheets 24 x 36 in. or smaller, complete with 15 amp. lamp for 110 volt, 60 cycle, A. C., . . . . . Each, \$200.00
- 4334-1D. Like No. 4334-1A, but with 25 amp. Lamp for 110 volt, D. C., . . . . . Each, 200.00
- 4334-2A. Like No. 4334-1A, but with 15 amp. Lamp for 220 volt, 60 cycle, A. C., . . . . . Each, 200.00
- 4334-2D. Like No. 4334-1A, but with 25 amp. Lamp for 220 volt, D. C., . . . . . Each, 200.00



No. 4310A

## DIETZGEN JUNIOR SHEET WASHER

This washer, especially designed for use with the Dietzgen Junior blue printing machine, thoroughly washes and develops blue prints and negative prints in sheets.

4310A. For prints 24 x 36 inches or smaller, floor space 24 x 12 inches, with tray 28 inches wide. Complete with chemical tray and brush. . . . . Each, \$60.00

## GLOBES AND CARBONS



4340AT



4340DT



4342C-12

- 4340AT. Globes, "Thermex" 400° heat resisting glass, 2 1/4 in. at top, 1 1/2 in. at bottom, 7 in. high, . . . . . Each, \$ 1.00
- 4340DT. Globes, "Thermex" 400° heat resisting glass, 3 1/2 in. at top, 1 1/2 in. at bottom, 8 1/2 in. high, . . . . . Each, 1.33
- 4340PT. Globes, "Thermex" 400° heat resisting glass, 7 1/2 in. at top, 9 1/2 in. high, . . . . . Each, 3.17

							Lots of 1-50	Lots of 50
4342A-9.	Carbons, oiled,	1 1/2	x	12	"	for A.C. Lamps,	\$0.09	\$4.50
4342A-12.	"	1 1/2	x	16	"	"	.11	5.10
4342A-16.	"	1 1/2	x	16	"	"	.15	7.05
4342AS-8.	"	1 1/2	x	8	"	"	.07	3.50
4342B-9.	"	1 1/2	x	9	"	and D.C. Lamps,	.07 1/2	3.55
4342B-10.	"	1 1/2	x	10	"	"	.08	4.00
4342B-12.	"	1 1/2	x	12	"	"	.09	4.50
4342B-16.	"	1 1/2	x	16	"	"	.12	5.90
4342C-12.	White Fluores Carbon, oiled, chemically treated, 1 1/2 x 12 in. Made specially for use on lamps either A.C. or D.C. (Carbon is not used on open arc lamp)						\$0.15	\$7.10

## BICHROMATE OF POTASH

234. Bichromate of Potash for intensifying and fixing Blue Prints. In Cans 5 Lbs. . . . . \$1.45 10 Lbs. . . . . \$2.45

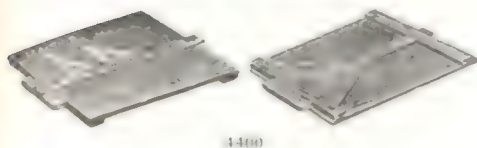




## Section 22

### DRAWING BOARDS, TABLES AND EQUIPMENT

#### DRAWING BOARD OUTFIT

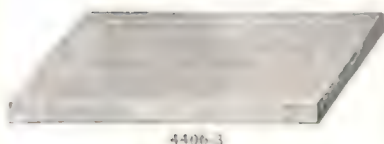


Drawing Outfits consisting of a well made Board, T Square and two Triangles. Compact, inexpensive and durable, and are excellent for school use.

		Dos.	Each
4400.	Size 10 X 12 in.,	\$ 8.00	\$0.80
4401.	" 13 X 19 "	12.00	1.20
4402.	" 17 X 22 "	17.00	1.70

#### DRAWING BOARDS

##### Basewood Drawing Board



	Board Size	Each
4406-1.	12 X 17 in.,	\$0.85
4406-2.	16 X 21 "	1.30
4406-2½.	18 X 24 "	1.65
4406-3.	20 X 24½ "	1.85
4406-4.	20 X 26 "	1.95
4406-5.	23 X 31 "	2.70
4406-6.	31 X 42 "	4.50

	Board Size	Each
4406-1.	12 X 17 in., (School Quality)	\$0.60
4406-2.	16 X 21 "	.95
4406-2½.	18 X 24 "	1.15
4406-3.	20 X 24½ "	1.30
4406-4.	20 X 26 "	1.40
4406-5.	23 X 31 "	1.90
4406-6.	31 X 42 "	3.35

#### PINEWOOD DRAWING BOARDS

These drawing boards are made of narrow strips of selected, well seasoned pinewood, joined together by tongue and groove. Two end cleats of the same material allow reasonable contraction and expansion under normal temperature conditions. These drawing boards have two drawing surfaces, and either edge can be used as a working edge.



	Board Size	Each
24410-1.	12 X 17 in., (School Quality)	\$0.50
24410-2.	16 X 21 "	.75
24410-2½.	18 X 24 "	.95
24410-3.	20 X 24½ "	1.05
24410-4.	20 X 26 "	1.10
24410-5.	23 X 31 "	1.50



	Board Size	Each	Ship g Wgt.
4414-5.	23 X 31 in.,	\$ 5.00	20 lb.
4414-6.	31 X 42 "	7.25	55 "
4414-7.	36 X 48 "	11.80	65 "
4414-8.	36 X 54 "	13.20	70 "
4414-9.	36 X 60 "	14.85	80 "
4414-10.	42 X 60 "	17.30	100 "
4414-11.	36 X 72 "	17.60	110 "
4414-12.	48 X 72 "	23.75	120 "





	Shp'g Weight	Each
4500. Draftsmen's Stool, golden elm, wood seat, height 30 in., .	20 lbs.	\$3.50

4502A. Draftsmen's Stool, golden elm, wood seat, height adjustable		
from 26 to 30 inches . . . . .	30 "	7.50

These Indestructo Steel Stools made of angle steel and finished in olive green baked enamel, are light, rigid, durable, comfortable and attractive. They are securely braced and specially reinforced with extra cross-supports and are furnished with a turned out foot rest. The feet are rounded and smooth. The seat is 14½ inches in diameter, made of hardwood, neatly finished.

[illegible]

The Multum Drawing Tables are substantially constructed of iron, with a neat japanned finish. These tables are very rigid and are adjustable in height from 30 to 46 inches.

The top, which is selected white pine drawing board, can be readily tilted to any angle and revolved to any position and securely held therein. These tables are well adapted for use of Architects, Artists and Draftsmen who desire a drawing table which can be readily adjusted, at their desire, to any convenient position.

These tables can also be furnished with an attaching ring as shown in the illustration, which permits several boards to be used interchangeably on the same stand.

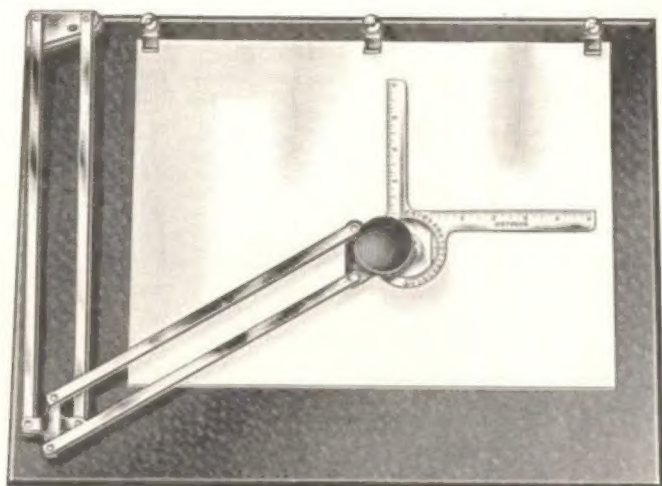


- |         |   |         |
|---------|---|---------|
| 4510.   | Multum Drawing Stand (without ring or board). Approx. Shp'g Wgt., 26 lbs.,<br>. . . . . Each,                   | \$14.00 |
| 4510-3. | Multum Drawing Stand (without ring) with board No. 4410-3, size 20 × 24½ in. Approx. Shp'g Wgt., 31 lbs., Each, | 16.00   |
| 4510-4. | Like No. 4510-3, but with board No. 4410-4, size 20 × 26 in. Approx. Shp'g Wgt., 32 lbs., . . . . . Each,       | 16.10   |
| 4510-5. | Like No. 4510-3, but with board No. 4410-5, size 23 × 31 in. Approx. Shp'g Wgt., 33 lbs., . . . . . Each,       | 16.90   |
| 4511-5. | Like No. 4510-3, but with board No. 4414-5, size 23 × 31 in. Approx. Shp'g Wgt., 34 lbs., . . . . . Each,       | 19.00   |
| 4510R.  | Attaching Ring for board, . . . . . Each,   | 3.00    |





## AUTODRAFT PORTABLE DRAFTING MACHINE



No. 4610

Every man who uses a drawing pencil will appreciate the convenience of a Dietzgen Autodraft which combines, in one handy, easy to carry unit, every tool needed for drawing: Board, Triangle, T-Square, Protractor, Scale and Thumb Tacks. The protractor graduated L-Square swings over the entire board, follows as fast as you can draw a line—there when you need it, out of the way when you don't. Your knee, a desk, a chair—is now your drawing table.

- Drawing board for drawings up to 14×19.
- T-Square. Semi-universal arm holds it always in true.
- Triangles. Protractor mounted L-Square does work of a score of triangles.
- Scales. Both legs of L-Square graduated in inches.
- Protractor. Any angle from 0 to 360 instantly available.
- Holding Clips—do away with thumb tacks. Permanently attached.

The entire mechanism is engineered of flat-sheen metal; control knob is of durable Bakelite, highly polished. Board is of high-finish, strong yet extremely light-weight Presdwood. Available in 2 sizes.

No. 4610.	Autodraft, 9 × 12 in., with L-Square and Protractor,	Each, \$5.75
No. 4612.	" 12 × 18 " " " " " " " " "	" 8.00
No. 4612W.	" 12 × 18 " unmounted, mechanism without board and paper clips,	" 7.25

### DETACHABLE SCALES

For added convenience and speed, these Detachable Scales in 4 styles of graduations are available. White edge boxwood scales with machine graduations that are accurate and durable.

No. 4616A-1.	Flat White Edge Scale; 6 in. Open divided; one edge $\frac{3}{8}$ , $\frac{1}{4}$ , other $\frac{1}{2}$ .	Each, \$1.50
No. 4616D-1.	Flat White Edge Scale; 12 in. Same as No. 4616A-1,	" 2.50
No. 4616A-6.	" " " " 6 " Full divided; $\frac{1}{2}$ and full size,	" 1.50
No. 4616D-6.	" " " " 12 " Same as No. 4616A-6,	" 2.50
No. 4616A-7.	" " " Chain Scale 6 in. Chain Scales 10 × 50 parts to inch,	" 1.50
No. 4616D-7.	" " " " 12 in. Same as No. 4616A-7	" 2.50
No. 4616A-9.	Flat White Edge Metric Scale; 20 cm. Metric Scales—Mm. and $\frac{1}{2}$ mm.,	" 2.00
No. 4616D-9.	" " " " 50 " Same as No. 4616A-9,	" 2.50

### CANVAS CASES

These canvas cases enable one to take full advantage of the portability of the Autodraft Portable Drafting Machine as they protect both the machine and drawing against rough treatment in transportation and the weather.

No. 4610C.	Canvas Case for No. 4610, 9 × 12 in. Autodraft Machine,	Each, \$1.25
No. 4612C.	" " " No. 4612, 12 × 18 " " " " "	" \$1.50

# DIETZGEN *Waterproof* DRAWING INKS

Flow Freely  
Dry Quickly  
Positively Waterproof!

DIETZGEN WATERPROOF DRAWING INKS are made of the finest materials obtainable. They are mixed uniformly . . . tested for uniformity . . . giving a consistently high quality.

The black ink is absolutely opaque.

Their wide use by Professional Draftsmen, Artists and Students is an endorsement of their quality.

The 10 brilliant true colors may be diluted with distilled water or mixed to produce other shades.

They flow freely, dry quickly, and are insoluble (waterproof) when dry.

Excellent for fine line work and wash drawings.

## 11 TRUE — DENSE BRILLIANT COLORS

- YELLOW
- ORANGE
- SCARLET
- CARMINE
- BLUE
- GREEN
- BROWN
- BRICK RED
- VERMILION
- VIOLET
- BLACK

